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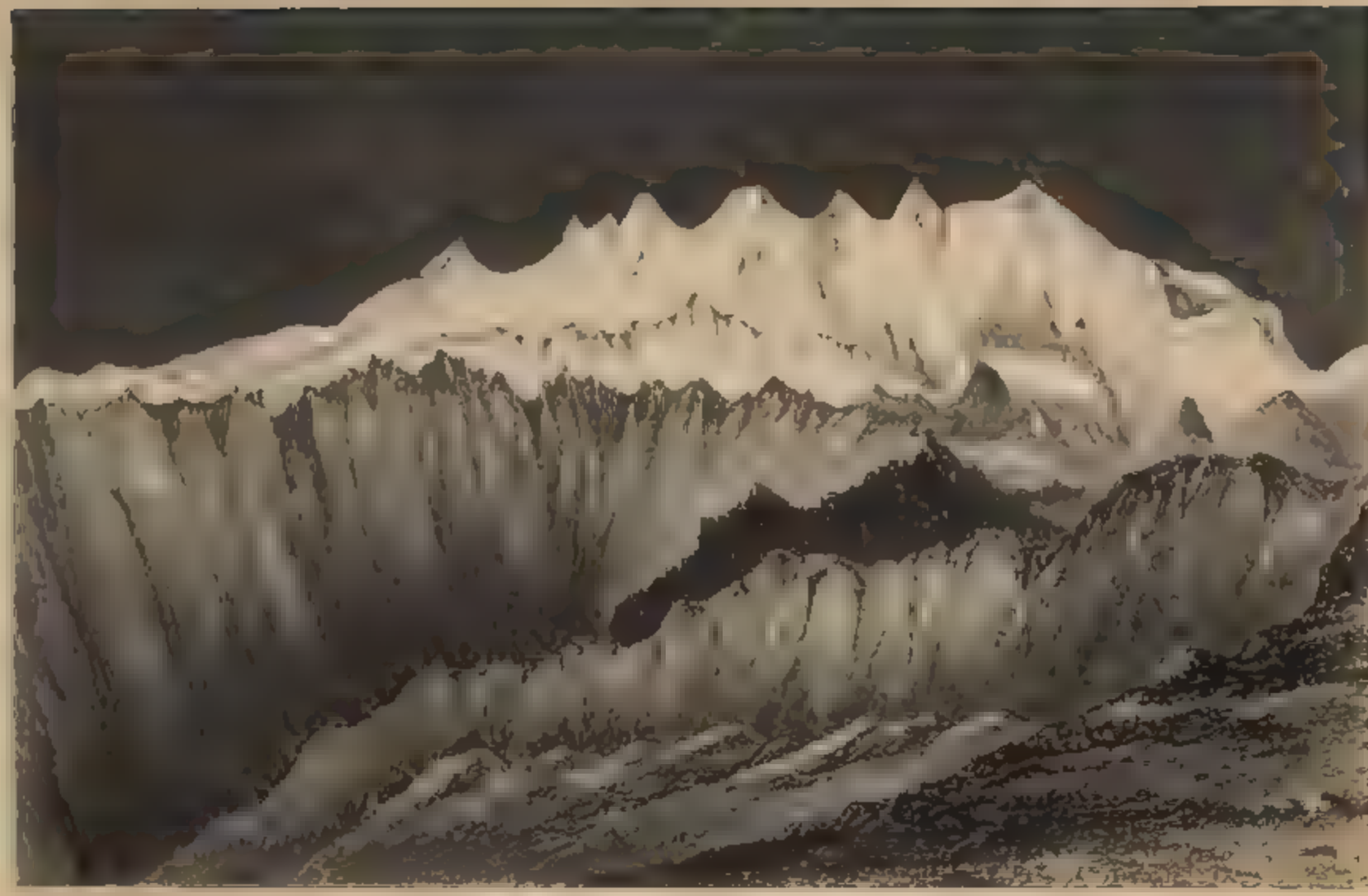

MONTE ROSA FROM THE COL DI CAMPELLO—VAL MASTALONE

THE

ITALIAN VALLEYS

OF

THE PENNINE ALPS:

A TOUR THROUGH ALL THE ROMANTIC AND LESS-FREQUENTED "VALS" OF NORTHERN PIEDMONT, FROM THE TARENTAISE TO THE GRIES.

By REV. S. W. KING, M.A., F.R.G.S.

WITH ILLUSTRATIONS FROM THE AUTHOR'S SKETCHES, MAPS, &c.

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THE ITALIAN VALLEYS

OF

THE PENNINE ALPS.

CHAPTER I.

VAL DU GRAND ST. BERNARD.—VAL DE BOSSES.—VAL D'AOSTA.

Great St. Bernard Pass — Object of tour — Preparatory arrangements — Convent — Historical associations — Pennine Alps — Chronicles of St. Bernard — Early service — Peasants at breakfast — St. Remy — Pass of the Col de Serena — Morgex to Courmayeur.

THERE are few incidents in Alpine travel which excite more strangely mingled sensations than the first sight of the lonely Hospice of the Great St. Bernard, in its winter robe of snow and mist, coming unexpectedly on the benighted traveller, who has toiled on foot up the long and weary ascent of the Val d'Entremont from Orsières. Overtaken on the last, and most trying part of the pass, by the rapidly deepening shades of an early winter evening;—barely able in dim twilight to distinguish, at a few yards, the tall poles, the only guides to the direction of the deeply-buried track;—enveloped in bewildering cloud-mist and whistling sleet, which sweep down on the icy wind from unseen mountain-tops;—plunging knee-deep in the thick snow, or stumbling in the dark over protruding rocks and down invisible hollows; benumbed and drowsy, the only wish is to sit down anywhere, but for one moment, regardless of consequences—when suddenly the outline of the Convent looms out at a few yards' distance, like a huge ark indistinctly seen through the drifting clouds. Hazy lights struggle through the mist,

from one or two of the many little windows, while the drip from the icicled roof splashes sullenly on the slushy snow beneath.

At the high steps of the ever-open Convent door weariness is forgotten. The long, vaulted corridor, cold and dark as a crypt, leads, by an iron gate at the head of a flight of stone steps, into the landing, lighted by a dim lamp. At a couple of tolls on the great bell hanging above, a blaze of cheerful light shines dazzlingly for a moment through an opening door, and a monk in Augustine habit bids you welcome. Wet, weary, and numb, you are conducted to a comfortable but simple dormitory, and after a change, if fortunate enough to have it, are soon seated in the refectory, the same room from which came the inspiriting gleam of light and warmth. With a blazing wood-fire, warm soup, good Aostan wine, and the pressing hospitality of the fathers, you forget the mist and sleet without, the dreary snow wastes, and the weary track, and can hardly realise the fact that you are 8200 feet above the sea-level, and in the highest permanent habitation in Europe.

Such was our first experience of this well-known pass, on a former visit, late in the year; nor shall we soon forget our feelings on reaching the Hospice, far on in the night, having lost our way in a heavy snow-storm, and been overtaken by darkness, which involved us in considerable peril. The season of the year, the state of the pass, the weather, and a variety of circumstances, have in fact the greatest influence on the impressions made by this and similar scenes, proportionate to the difficulties or danger encountered. The traveller, mounted on a good mule, arriving in the daylight of their short summer, when the lake is unfrozen and the gorge almost clear of snow, though he cannot fail to be struck with the wildness and melancholy of the situation, can however but feebly realise the sensations of an unhappy peasant forced to cross in mid-winter, exposed to avalanches,

plunging up trackless steeps of snow, and perhaps only rescued, exhausted and half-frozen, by the exertions of the monks. On this our second visit, as it was the beginning of August, the pass was clear, the ascent in full daylight comparatively easy, and we enjoyed the grateful change from the stifling heat,—which was ripening the grapes in the valley of the Rhone below,—to the fresh mountain-air, the rushing torrents streaming down on all sides, and the beds of lovely Alpine plants peeping from beneath the retreating snow.

Though six years had elapsed since we had last trodden the same track, every feature of it seemed familiar. The lonely Cantine de Proz, where we halted for breakfast, was as dirty as ever. The little Morgue was just as I had sketched it, though the bodies then in it had nearly mouldered away, happily replaced by no recent ones. But it was not until we advanced up the desolate rocky path, and the penetrating clouds poured down on us with a damp chill, breaking only for a moment to disclose some lofty peak sheeted with snow and glacier, that we were fully reminded of our former ascent. As then, the mist prevented us from seeing the great square building, until we were close under its walls, and almost at the familiar steps of the Convent door. We were only too glad to hasten for shelter once more from the piercing clammy wind, which blew the scud and sleet past us like wreaths of smoke.

Unloading the mule as soon as it came up, and dismissing the muleteer who had come with it from Martigny, we found our own way, as the place seemed deserted, along the well-remembered corridor, to the refectory, where the Chanoine l'Eglise was sitting alone, and greeted us with a hearty welcome. Being the resident Superior, he does not usually receive visitors, but happened that day to be the only monk remaining in the convent. This was fortunate for us, as one object which had brought us there, was to see him, and benefit by his experience of several of the less known passes,

which we were intending to take. He had given the other eight monks leave for the day, and they had gone in separate parties, with the dogs and men, some to repair and replace the poles and cairns which mark the winter track—others to look after their herds in the summer pastures below.

We were glad to ensconce ourselves by the warm fire, my thermometer outside our little dormitory window falling to 28°, or four degrees below the freezing point, while at Martigny, the day before, it had been at 82° in the shade. No other travellers arrived, the weather having become wild and stormy, thickly falling flakes of snow drifting past the double glazed windows. After an early dinner with the hospitable Chanoine, who produced a flask of their best Malvoisie from the convent cellars, we had the afternoon to ourselves without interruption, and, spreading the table with maps and charts, he gave us the advantage of his experienced suggestions with regard to our future route.

Our project was, after crossing the Alps, to explore and traverse, from head to foot, all the remote and less frequented valleys of Piedmont, which descend from the steep southern face of the great Pennine chain, from Mont Blanc west to Monte Rosa east. The latter noble mountain, with its deep glens and their remarkable inhabitants, had been an especial object of interest to us, ever since we had been present at one of the great annual fairs at Varallo. The picturesque Greek-like costumes peculiar to each Val—the striking beauty of the women both young and old—the accounts we heard of the district—and also its romantic scenery, so far as a hasty reconnoitring enabled us to judge, excited a strong wish to see more of them; and when, from the road between Como and Milan, on our way to Venice, we took a farewell look of Monte Rosa, its many summits glittering in the setting sun like a wondrous mass of crystal, we determined to revisit it on the first opportunity.

Another and at least equal incitement was the desire to

explore the wonderful glaciers and scenes of Alpine grandeur of these southern valleys. Many of them have hitherto been but little known, except to scientific travellers, or through the pages of De Saussure and Forbes. They promised too, what it is not easy to find nowadays, the pleasure and adventure of travelling in a country not overrun with tourists, and abounding in every element of natural interest — from the snow-peaks, glaciers, and wild ranges, the last haunts of the all but extinct Bouquetin, or Ibex, to the rich valleys, with their strangely-mixed races of Savoyard, Piedmontese, Italian, and German; as strongly contrasted as the wonderful gradations of their vegetation.

With this object in view we were on our way across the Alps. Profiting by experience, we had divested ourselves of every possible encumbrance, and reduced our baggage to the smallest compass—expecting that we must often encounter wild districts and difficult passes: at the same time, from the probability of very scanty accommodation in the chance quarters we might meet with in the remoter valleys, where inns are rare exceptions, we were obliged to provide such articles as might render us independent of all but a roof. Accordingly, one of Whippy's portable side-saddles for E., folding into a compact waterproof case, and adaptable to a donkey or a horse,—a pair of saddle-bags, small, but of most multifarious and well-selected contents, comprising every possible requisite, —a spare bag for emergencies,—plaids, waterproofs, a portable cooking apparatus and adjuncts, fly rod, vasculum, and some instruments, with various maps, charts, and necessary guide-books, constituted the total of our personal travelling kit for the next three months. We had besides, a reserve depôt of a couple of light air-tight japanned cases, so arranged with straps as to be easily adjusted on either side of a mule. After crossing the Alps these were to be sent on to some convenient point in advance, for the purpose of replenishing our scanty wardrobe if necessary, and to receive future collec-

tions of plants, minerals, and other matters. The whole together weighed only 132 lbs.

Our original intention had been to take the St. Bernard route up the Val d'Entremont as far as St. Branchier, and, leaving it there, to strike to the left up the Val de Bagnes, crossing the Alps by the glaciers of Getroz and Chermontane, and so enter Piedmont by the Val Pellina. We had accordingly arrived at St. Branchier on the 8th of August, when, on making inquiries, we were told that, from the immense fall of snow the previous winter, the glacier of Getroz was not yet practicable for a mule. Knowing from experience how little the reports of the inhabitants of the lower parts of a valley are generally to be relied on in such cases—although our muleteer was most unwilling to proceed—I was resolved not to give it up on their representations only, and pushed on further up the valley to glean some encouragement.

But a shepherd of Chable, who had lately come down from the highest châlets, gave a similar account, and, other inquiries seeming to confirm it, we were at last obliged reluctantly to abandon the attempt, as we could not leave our baggage behind. We took up our quarters at Orsières for the night, and reconciled ourselves to the disappointment by resolving to explore the glaciers of Chermontane from the south side, when in the Val Pellina, and in the mean time cross the Alps by the pass of the Great St. Bernard, and revisit the Convent.

Had we had the benefit, when at St. Branchier, of the Chanoine's experience of the Col de Fenêtre, we should most certainly have attempted it, and should probably have succeeded. So far on our way, however, we grudged losing time in retracing our steps—especially as the weather had become unfavourable for difficult mountain undertakings. The result of our deliberations was, that we should endeavour to reach the Allée Blanche at the southern foot of Mont Blanc, by a pass also called the Col de Fenêtre (a common

name for these notch-like passes in the loftier mountain ridges), leading over from the St. Bernard, at a height of some 9200 feet, into the Val Ferret, which lies under the base of the left or eastern flank of the Mont Blanc chain. By this route we should have the opportunity of examining some features of geological interest, and also avoid the beaten track of the St. Bernard.

Studer and Escher's geological chart led to some conversation on the formation of the neighbouring mountain-ranges, and we adjourned to the library, where, beside the well-filled bookshelves, a good electrical machine, and other apparatus, was a small collection chiefly illustrating the mineralogy and geology of the district. During the commotions of 1848 and 1849 we had seen it all in disorder, huddled away in an upper room; now, however, it was neatly arranged in glass cases. Among the specimens I found a portion of the "rocher poli," described by De Saussure, and which I hoped to see on our way over the Col next day. This fragment consisted of a very hard compact quartz, of a dark bluish black, and varied with lighter veins. The exposed surface is glossy and bright as polished marble, and very finely striated with close hair-like parallel scratches, which at first sight suggest glacier action, but its situation at the summit of the Col precludes the possibility. De Saussure describes it* as forming the very crest of the chain, descending to the E. at an angle of 45°, its surface in places quite flat, so that slabs of 8 or 10 feet long, and proportionately wide, might be cut out: in other parts slightly wavy, but everywhere equally polished, with a lustre more like agate or jasper than marble. The cause of this singular phenomenon he attributes to the friction of fine grit or earth in which the rock is partly buried. My hopes of examining it in situ were destined to be disappointed, but a portion of the block in the museum was kindly presented to me.

* Voyages dans les Alpes, § 995.

Before it became dusk we sallied out and faced the Spitzbergen-like weather, for a scramble among the rocks, and to the site of the ancient temple of Jupiter, which was buried in snow on our previous visit. For some little distance from the Convent a sheltered terrace, scarped on the face of the rock, or piled on stones, and catching what sun there is when it shines, forms the only level bit of promenade the monks have outside their own walls. The further part of this, however, was now buried under a steeply-sloping bed of deep snow, left from last winter, and almost touching the "Convent garden;" two little terraced patches within low walls, four or five yards square, in which grew a few tiny lettuces almost microscopic, and two or three equally diminutive representatives of the cabbage tribe, name unknown. De Saussure's description in 1778,—"Ils ont peine à produire à la fin d'Août quelques laitues et quelques choux de la plus petite espèce, pour le plaisir de voir croître quelque chose,"—might have been written that week. Perhaps this forlorn attempt at a garden, with the thought that it was the height of their few weeks of summer, dark clouds of sleet sweeping over us and whitening the little lettuces, while we had left all bright and glowing in the valley below, gave us a more forcible impression than anything else, of the dreary life of self-sacrifice to which these worthy men devote the best years of their existence.

Crossing the steep bed of snow with a sensation of delight, as we crunched its crisp surface, at feeling ourselves once more within the regions of snow and glacier, we climbed the rocks to a high point, below which, on the edge of a bluff rock, stands a large stone cross, simple and massive, mounted on a plain square base. It is inscribed "Deo Optimo Maximo," and is visible in clear weather far down the southern descent of the pass, the appropriate emblem of that true charity, of the very essence of Christianity, which is here so nobly exemplified.

CONVENT OF GREAT ST BERNARD AND MT VELAN

To the southward bleak and jagged pyramids stretched across the horizon in successive ridges, the deepening gloom increasing their savage wildness. Conspicuous among those in the foreground was the singular insulated mass quaintly called the Tour des Fous, a fantastic pile of upreared tables of quartz, of which these ranges in great part consist. They all run in a direction from N.E. to S.W., parallel to and inclined against the great primitive chain; and through the long trough-like gorge thus formed, the cutting "bise" pours with relentless keenness intensified by the snows and glaciers over which it sweeps. Rifts in the whirling cloud-masses between us and these distant peaks revealed occasional glimpses into a profound treeless valley, far below our feet, where we could distinguish the Convent herds grazing. In the narrow rock-bound gorge in which we seemed hemmed in by the lofty snow dome of Mont Velan, the Pic de Dronaz, Mont Mort, and Mont Chenellette, stood the Convent itself, grey and sad-looking as the waters of the gloomy little lake on which it abuts. This lake, which is amongst the highest in the Alps, and has frequently never thawed during the summer, appeared, as we looked down on its ruffled surface, of the inkiest black hue, the more intense from the contrast with the snow-patches which fringed its desolate basin. The Stygian waters fed by the melting snow are tenantless (as no fish can live in them, though the experiment has been tried more than once), unless the ghostly white trout appears here as at the old Abbey of St. Maurice in the Valais, where, as the legend tells, it is always seen in the convent ponds on the death of each monk. Amidst all this desolation and savage gloom brilliant little patches of the exquisite blue gentian, the white *ranunculus glacialis* and *dryas octopetala*, bright forget-me-nots, the crimson stars of the *saxifraga oppositifolia*, and other Alpine plants, flourished with a cheery brightness which gave a life even to the sombre mosses and grey lichen-covered rocks.

Descending these rocks to the lakelet, we came on the shaft of a column, and the ancient stone, covering a limpid little spring, which marks the often contested boundary dividing the Val d'Entremont on the N. from the Val d'Aosta on the S. A line is drawn across its rounded surface, and on their respective sides it bears the weather-worn escutcheons of the cross argent of Savoy, the six estoiles of the Valais, and the sword and pastoral staff crossed in saltire, the insignia of the Prince Bishops of Sion, who were anciently the feudal counts of the Valais. The spot however of the greatest interest is the narrow plain, where ages past were reared the Celtic altars of Pen, and after them the famous Roman temple of Jupiter. But scanty records are left us, beyond their bare names, of the hardy primitive tribes of Ligurian Celts who first penetrated into and peopled these mountain fastnesses. Scarce half a dozen words of their language are recoverable, and, as Niebuhr says, "the narrow limits of history embrace only the period of their decline as a nation." Here however we know from concurrent testimony that they erected an altar to, and worshipped, their god "Pen," the divinity of the mountains, one of whose symbols was the cairn or the large monolith placed on the loftiest points. On this spot the half-savage Veragri and Salassi invoked his aid in their fierce border feuds, and celebrated their rude rites—probably akin to those of the northern Celts who peopled our own island, and have left in the ancient British word "Pen," and the Gaelic "Beinn" or "Ben," as applied to our highest mountains, the memorial of the same worship.

The conquering legions of Rome were the first pioneers of civilization across this Alpine crest, after the victories of Augustus over the Salassi of Val d'Aosta; and as the bronze image of Jupiter Capitolinus has in later days, with equally facile adaptation, become the St. Peter of the great temple of modern Rome, so the altar and worship of the Celtic Pen

were metamorphosed into that of Jupiter Penninus. A temple was erected, and the shrine increased in fame, as the Roman Legions established this as one of their chief highways to the conquest of the countries beyond the great barrier of the Alps. The extraordinary number of coins, relics in bronze, &c., and votive tablets, discovered on and about the site of the ancient temple, and now preserved in the Convent museum, attest its importance as a well-frequented pass at that early date.

A part of the Roman road may be seen to this day on the rocks of the southern side of the plain. We looked on the rude but solid track left by these ambitious warriors, with admiration at their universal enterprise, and the thought too how their greatness had vanished and what different feet had trodden the same road since theirs who made it. Amongst the recorded passages during their era was that of Cæcina, one of the generals of the rebel German Legions which declared for Vitellius. With his army of 30,000 men (among whom were the cohorts recalled from Britain, and the squadron of horse called "Ala Petrina," which had been stationed in Cumberland) he marched over the Pennine Pass in Feb. A.D. 59, through a waste of snow, and amidst all the rigours of midwinter.*

Rome and her power waned and fell, and the barbarian hordes swept over Italy. No coins have, I believe, been found later than Theodosius II., and the Mons Jovis was probably abandoned by the Romans in the 5th century, at the time of the irruption of the Goths with Alaric, the Huns under Attila, or the Vandals under Genseric. During the long and dark period that followed, Ostrogoths, Franks, Burgundians, and Lombards crossed and recrossed the Pennine pass in their incessant wars and invasions of each other's domains. In the year 774 the plain of Jupiter saw the armies of the great Charlemagne, under his uncle Bernard, who probably gave his name to the pass, which it

* Tacit. Hist., lib. i. lxx.

has ever since retained; and after conquering Didier, the last king of the Lombards, Charlemagne himself recrossed it at the head of his victorious troops.

But the brightest epoch in the history of the Mons Jovis was the year 962, after the re-establishment of the Empire in Italy by Otho of Saxony, when Bernard de Menthon, Archdeacon of Aosta, founded the Conventual Hospice, and reared the first Christian altar to the worship of the true God. As tradition asserts, and not improbably, he abolished the last remains of pagan worship, said to have lingered until as late as the 12th century in the even now semibarbarous Val d'Anniviers. It is more than probable, that, in the Roman era, a refuge or "hospitium" of some kind was established for the convenience of those who crossed the pass, especially in winter, as well as for the accommodation of the custodes of the shrine of Jupiter Penninus. This would become an obvious necessity as the pass became more important, and we have records of an hospice existing there two centuries before Bernard's time. In the treaty made by Lothaire II. of Lorraine with his brother the Emperor Louis II., A.D. 859, as stated by Saussure, it is called the "Hospital of St. Bernard." But it was the Apostle of the Alps who conceived and carried out the noble design of establishing permanently a house of refuge, founded on the basis of Christianity, and which has justly rendered his name immortal.

In the troublous times which subsequently followed, a new race appeared on the Mons Jovis. The Saracens ravaged the Convent, and were in turn attacked by the Normans in this wild region. The records of the convent were then destroyed by fire, a catastrophe which has happened since; but history recounts many interesting events which had the great St. Bernard for their scene. Pilgrims bound to Rome frequented it, travelling in large caravans for mutual protection from the brigands who infested it after the Saracen in-

vasion; and we find our own king Canute, himself a pilgrim to the tomb of the apostles, by his representations to the Pope and the Emperor Adolphus on behalf of his English pilgrim subjects, obtaining the extirpation of those lawless bands and the free and safe use of the pass.

Its snowy heights were once more scaled by an army in 1034, when the standards of Herbert of Milan and Boniface of Tuscany were led by Humbert "the white-handed," Lord of the Val d'Aosta, over the Pennine Alps, to join Conrad in the conquest of Burgundy. Humbert was the first founder of a dynasty which, under wise and moderate princes, has come down to our own days (the present heir to the throne of Piedmont bearing his name), and has recently played so gallant a part in the affairs of Europe; apparently destined to become the rallying point for the regeneration of fallen Italy.

Not to enumerate the many other events of note in its history, the resolute genius of Napoleon accomplished the passage of the St. Bernard in the spring of 1800, with an army of 80,000 men and 58 field-pieces, on his march to the field of Marengo, on which followed the utter prostration of Piedmont, and its annexation to France.

The day before our arrival a large troop of transport mules had crossed on their way to join the gallant little army of the now restored and flourishing kingdom of Sardinia, doing battle in the distant Crimea on the side of England, and allied with France, the former common enemy of both, against the crafty encroachments of Russia; who, be it remembered, in those same eventful times was the ally of England and Austria, as the champions of Italy and Piedmont against Napoleon, and in 1799 proclaimed the brief restoration of Charles Emmanuel IV. to the throne of Sardinia.

What mighty changes has the history of the human race to record, since the days when the wild aborigines of the great European family first migrated hitherward, and found

these mountains and valleys silent and tenantless; while the realm of nature, of perpetual snow, ice, and adamantine mountain, has continued unchanged and unmoved; the history of its revolutions reaching back to millions of ages beyond our ken, and read only by the great Creator himself!

It was a grand idea of the sturdy Highland Celts to select such a scene of Alpine grandeur, on the crest of the noblest chain in Europe, for the temple where they rendered homage to their conception of the Divinity as shadowed forth in the sublimity of mountain vastness. That stupendous range, which bears to this day the appropriate title of the Pennine Alps, proudly boasts of being flanked by the two loftiest mountains in our quarter of the globe, Mont Blanc and Monte Rosa. Between them is the third in height, the giant obelisk of Mont Cervin, while along the glittering range the scarcely inferior peaks of the Breithorn, Michabel, and Alphabel, the Dent Blanche, Mont Gelée, Mont Combin, Mont Velan, the Aiguille Verte, Grande Jorasse, and the Géant,—most of them above 13,000 feet in height,—tower into the heavens above a host of other summits, like motionless sentinels on the ice wall which shuts in the sunny plains of Italy from the grey north.

From the dazzling snow-fields and glaciers which seem to overhang the heads of the valleys on the southern side, framed in forests of dark pine, stream down torrents innumerable, rushing with augmenting volumes through these romantic glens or "Vals,"—deep rifts from the main chain often 30 miles in length, with scarcely a passage, but for the chamois or shepherd, over into the adjacent one. At length—in rich vine-clad valleys, among fields of maize, rice, and trailing gourds, deep groves of chestnut and walnut, fig, mulberry, and almond trees, orchards, trellised vines terraced up the mountain-sides, and meadows of the fairest green irrigated by refreshing streamlets—they converge and form the Dora Baltea, the Sesia, the Tosa, and finally the Po itself; which may not

inaptly be termed the Gihon, Pison, Hiddekel, and Euphrates of this Paradise of Europe. These romantic Vals, from that of the Allée Blanche under Mont Blanc, to the Gries Glacier at the head of the Val Formazza, were to be the scenes of our future adventures, with what fortune remains to be told.

Night and the piercing cold at length drove us back into the Convent, and after vespers and the evening meal, at which the Clavandier presided, we were joined by the Chanoine l'Eglise, who brought me some promised notes, subsequently of great service to us. As we sat round the blazing wood-fire on the hearth, which threw a ruddy glow on the pine wainscot, we enjoyed their agreeable conversation, which, meeting as they do, day after day, with every variety of character and shade of opinion, manifested a breadth of views, a liberality of spirit, and intelligence, as agreeable as it was in strong contrast to the ordinary narrowing tendency of a monastic life. Strange as it may seem, in this sunless and icy spot, they spoke of their years as passing swiftly and pleasantly between religious duties, studies, the exercise of hospitality, and other occupations. Nine monks were then in residence, our friend the Chanoine l'Eglise being the Superior, and M. Meillant the Chanoine Clavandier, whose onerous duty is to attend to the entertaining of visitors, feeding the peasants, and purveying for the Convent—a serious affair from the great numbers that frequent it, and the St. Bernard itself produces nothing but water, which is, however, good. In the autumn 40 cows and a proportionate number of sheep are killed from their herds which pasture in the lower valleys, and are salted down for winter consumption, and during that long season they have no fresh meat. As might naturally be supposed, such a regimen, combined with the intensity of the climate, and the evils of exposure at so great an altitude, tell rapidly on the strongest constitutions, producing headaches, pains in the chest, liver, &c., and they told us few could bear it long.

The Chanoine l'Eglise had been there, however, for the very unusual length of 22 years, but, though only 40, we were afterwards told he was "très souffrant," being constantly ill, and must soon retire, though no complaint ever passed his lips. Before he became Superior he was Professor of Theology, and still superintended the instruction of the younger monks with great ability. The servants spoke most affectionately and enthusiastically of him and of his interest in their welfare, collecting them together at every opportunity, especially in the winter, for religious instruction. We were sorry to learn on inquiring for him, that the very agreeable young monk who entertained us on our last visit had had his then expressed prognostications fulfilled, and was since dead. When they are no longer able to bear the severities of the Hospice life they are sent down to a subsidiary establishment at Martigny, or to the different cures in the valleys belonging to the Convent, as Orsières, Liddes, and others, as parish priests; a time they seem to look forward to with dread, as an existence almost out of the world, the change being so great after the bustle of the Convent and the constant association with each other and travellers from all parts of the world. The more one learns of their life and history, the more admiration and respect one feels for the worthy successors of the charitable founder of the Hospice.

The history of St. Bernard himself as told by the chroniclers was a remarkable one, and even romantic in the earlier part of it, though the fair sex will hardly look upon his conduct at that period in as favourable a light as his biographers have done. We learn from them* that his father Richard de Menthon, and his mother Bernoline de Doingt, having no other child but Bernard to inherit the family estates and the Château de Menthon on the Lake of Annecy, where Bernard was born in 923, were naturally anxious that he should marry, and had planned a match with an heiress

* Ibertis, Essai Historique, &c., chap. iv.

of the neighbourhood, of considerable accomplishments, with which object Bernard was recalled from his studies in Paris. Unhappily the charms and the fortune of the fair Marguerite de Miolans were lost on him, as well as all the appeals of his parents to the sole prop of their house, for, unknown to them, he had formed the resolution of entering the church, in which his preceptor Germain had greatly aided. Suspicions were entertained of his tutor, who was dismissed; Bernard was carried to the Château de Miolans; and all parties but one were in joyful anticipation of the happy event, which was to unite the two houses.

The night before the wedding Bernard retired to his chamber, prayed for the intercession of his patron, St. Nicolas de Myra, who enlightened him by the apparition of a supernatural illumination, and thus encouraged he left a note on his table addressed to his parents, and escaped through the window. Putting the Graian Alps between himself and the Château de Miolans, he fled to Aosta, where he was received by the venerable Archdeacon Pierre de la Val d'Isère; became in due time a priest, and at length on the death of his patron worthily succeeded to the archdeacoury. His career was one of distinguished zeal, piety, and usefulness; the Bishop of Aosta associated him with himself in the labours of the diocese, and his efforts were especially successful in the new field of establishing schools and colleges. Aosta lying at the foot of the two passes of the Pennine and Graian Alps now the Great and Little St. Bernard—he became at an early period cognizant of the dangers and loss of life to which travellers were exposed, as well from natural perils as from the swarms of banditti who infested them, the Great St. Bernard especially; and the great object to which he directed his energies was to tame these wild savages, convert them by his preaching, and establish by the site of the old Pagan temple a Christian church and a house of refuge for travellers. His labours were eminently successful; he founded the Con-

vent over which he presided for 40 years, and the fame of the Apostle of the Alps spread far and wide.

Amongst others who were drawn there by the reputation of his sanctity and wisdom, there one day arrived two venerable strangers, to entreat his assistance and advice, in their search for a long-lost son. They told with much emotion, how he had been loved and cherished, how he had grown up all their hearts had desired, and how brightly the future seemed to smile on all their hopes for him. An alliance with a maiden, as good as she was fair, was their crowning wish. The bride waited at the altar, but the bridegroom had fled; a few lines only were found which he had left, but giving no clue to his place of flight. Since that day they had mourned him for many long years, and all their efforts to discover him had been fruitless; now they were on the verge of the grave, and their only hope and prayer was, that God would once more permit them to see their son before they died. The Archdeacon, without betraying his emotion, consoled them with the hope that, as God had doubtless inspired so extraordinary a resolution in their son, so he might see good to bring him to them again, at a moment when they least expected, and then, leaving them, withdrew to calm his own beating heart in private devotion. Some mysterious resemblance to their lost son had been traced by them in the features of the Archdeacon, but the idea as they discussed it was rejected as impossible, when their chamber was once more entered, and this time with the consolation not of hope but of reality: the Apostle of the Alps threw himself on the neck of his bewildered parents, with the words, "I am your son! Bernard!" After some days of interchange of affection, they bade him farewell, and returned to the Château de Menthon, to spend the few remaining days of their life, blessing God, like Simeon of old, that they had seen the object of their long desires; and, concludes the chronicler, "Happy parents! doubtless in

the homes of immortality you now possess that son whom you so long mourned in this land of exile, restored to you in an eternity of happiness, where separations and afflictions are no more."

Bernard's last journey was to Rome, to obtain the Papal sanction to his foundation of regular canons; on returning he died at Novara in June, 1008. The skull and an arm of the canonized saint are deposited as relics, under an altar of the Convent chapel.

The arms of the Convent, as carved in the refectory, are a burning heart on the point of a mountain rock, a star in chief, and on either side the columns of the Great and Little Mons Jovis.

We heard that the late earthquake of July 25th, which had caused so great destruction in the valley of the Rhone, had been felt here very severely. At length we retired, and among the many marks of hospitable attention shown us, not the least welcome was the unexpected luxury of a blazing fire, and a bountiful supply of wood, lighted for "Madame," in our simple but scrupulously clean dormitory. This attention was the more appreciated, as we knew the whole of the wood for the convent fuel was brought over the Col de Fenêtre, an elevation of 9000 feet.

By 5 o'clock we were roused in the grey dawn by the bell for matins, and shortly after the distant tones of the organ pealed along the vaulted corridor, communicating with the church by a grated door. We took our seats in a quiet corner of the church, where we were gratified to see some fifty peasants already collected at that early hour to perform their devotions before descending the pass. The Superior performed mass at the high altar robed in crimson satin and gold cope, and on either side two monks in crimson tippets and a short surplice, fringed with lace, over the black cassock. The solemn melodies of a Gregorian mass were accompanied on an organ of fine and full tone remarkably preserved at so

high an altitude. There was an expression in the exquisite symphonies extemporized by the young monk who played, which was very touching, the more so as we knew, poor fellow! that he was doomed, being reduced to such a state that he was shortly to be sent down to Martigny, probably to die. The service over, the Superior unrobed, and retired to his seat in the carved oak stalls, when another priest in white and gold cope administered the sacrament to the peasants, who knelt at the altar rails.

The church is adorned with five altars, gilt and decorated in the usual manner; beside frescoes, paintings, and other enrichments, which contrast with the wild region and the naked simplicity of all else in the Hospice. Beside the relics of St. Bernard already mentioned, are those of St. Hyrenæus and St. Maurice, martyrs of the celebrated Theban legion of Christians, once 6600 strong, who were finally destroyed by Maximinian at Agaune in the Valais, which now bears the name of their leader St. Maurice. The tomb of Desaix, who fell at Marengo, has a simple inscription.

Service over at seven, we went, by a previous appointment with the Clavandier, to see the peasants, who had been lodged for the night, at their breakfast before they started to descend the pass. The first of four rooms at the end of the lowest corridor, contained a motley wild-looking group of the lowest class of poor, clothed in rags, some covered with festering sores, and all more or less with vermin, the inmates of the Convent owing their safety from them to the severity of the climate alone, but for which the Chanoine told us, in spite of all their precautions, they would be *perdus*. A separate building, formerly used for the accommodation of female travellers, is wisely set apart for the sleeping quarters of this class. It was strange to see what wretched creatures were congregated together; crétins, grinning at one with their hideous vacant stare; half-clad children, who had trudged up with bleeding feet; and miserable infants, clinging to their

mothers, who were disfigured by blue-veined bloated goîtres. We were attracted by one most picturesque-looking ruffian, with long grey beard, enormous moustache, and brigand hat with a reckless cock on one side, and found on inquiry he was an old soldier of Napoleon, who had crossed the St. Bernard with him more than half a century ago. A good quaigh, or wooden bowl of "potage," with black rye-bread shred into it, was handed round to every one alike, after that a ration of bread and cheese, and then to each a couple of glasses of red wine.

The adjoining room contained poor, but decent-looking peasants, who had the same fare; in the kitchen were muleteers, guides, &c.; and in a third the better class, such as farmers, students, and travelling merchants; the only difference in these rooms being, that food and flasks of wine were placed on their tables for them to help themselves, which those in the first room were not permitted to do, as it was found they infallibly fought and struggled savagely, the strongest seizing everything.

In the kitchen, where the muleteers were breakfasting, several large coppers or "marmites" were at work concocting the "potage," and near them great heaps of hard rye-bread cut into lumps like sugar, which, though it is black-looking and hard enough, is most sweet and nutritious. I struck a bargain with a muleteer, who had slept at the Convent, engaging him, conditionally on the weather, to convey our baggage over the Col de Fenêtre; and after a hearty breakfast of coffee, and bread and honey, while waiting for the expected clearing of the clouds, which began to show breaks in the dense volume enveloping the Convent, we went to see the dogs which had been out the day before. In consequence of a fatal malady which had prevailed generally, there were but two of them remaining, Mars and Juno, two noble creatures, who were delighted to be caressed, thrusting their cold noses alternately into our hands and then into the snow,

in which they snuffed and burrowed with evident pleasure. Juno was suffering from a serious pulmonic or pleuritic attack, and considerable apprehensions were felt for the preservation of the pure breed, as they had sent this year to Martigny, the little St. Bernard, and the Simplon, and found that in each place the puppies had all died.

A former visit to the Morgue had left such vivid impressions, that we did not care to alter them by revisiting it, and happily, thanks to the exertions of the monks, no life had been lost for several winters. We shall long remember the painful spectacle on that occasion — black and shrivelled bodies almost nude, in every hideous form of contortion, ghastly as the dried corpses preserved in the catacombs of Palermo; some recent, others mouldering into the thick bed of bones and human dust forming the floor, on which were grouped in varied attitudes the mummy-like spectres of once warm flesh and blood. I can still see a gaunt figure reared upright in a corner, the withered arms outstretched in the agony of death, while the wide sockets of the eyes, filled with white mould, literally glared from the blackened face in the misty light from the grated window.

We would willingly have accepted the kind and pressing invitation of the Fathers, to spend some days with them and attempt the ascent of Mont Velan, but the weather gave no encouragement for such an undertaking: our plans too were formed, and the baggage, ready packed on the mule, was waiting for us. Sincerely thanking them for their unfeigned kindness and hospitality, we returned their cordial farewells, and took our way down the Italian side of the pass. We had not descended far towards the Vacherie, when the morning sunburst brightly upon us, and we looked back to the cloud-covered summit, with kindly thoughts of the good monks of St. Bernard, steadily following, summer and winter, their work of Christian charity in that dreary region of cloud and snow.

Before quite reaching the bottom of the deep basin into

which we had looked down the day before, a track turned to the right to the Col de Fenêtre, by which we intended crossing to the Val Ferret, and descending to Courmayeur, and here we halted with many misgivings as to our being able to take the pass. A dense "brouillard" hung over the mountains, which however was every now and then cleft in two, thinning for a moment from the snowy peaks, and showing an exciting glimpse of the commencement of the pass, mounting a steep gully strewn with rocks, and pent up in the tabular quartz ranges.

We lingered for some time with decreasing hopes, each Col de Fenêtre seeming destined to disappoint us. At length, the clouds settling hopelessly down, we were compelled to abandon it, our muleteer refusing to encounter the risk of traversing the Col in such heavy mist, while we ourselves should certainly have seen nothing. There was no help for it but to descend to St. Remy, with some hopes, as it seemed clearing to the southward, of trying another pass leading over to Courmayeur, of which we had heard at the Convent.

As we rapidly descended, the bright sunshine warmed and inspirited us; and though the mountain side down which the zigzag track leads, was little more than a débris of decomposed mica schist, swept by spring avalanches, yet numerous brilliant Alpine flowers studded it in profusion, and hundreds of butterflies basked like ourselves in the warm sun; especially various dusky Hipparchias, bright blue Polyommati, and green-veined Daplidices, clustering thick on every tiny bloom. Behind us and to the N.W. as we looked back, the wild peaks of the Tour des Fous, the Pain de Sucre, and apparent fields of glacier, struggled fitfully through the whirling clouds.

We were not long in reaching once more the line below which the larch and pine, at first stunted and thinly scattered, began to clothe the bases of the mountains; châlets dotted the pleasant green meadows; and at midday, in a narrow pent-up gorge, overhung with thick pine forest, we reached the little

cluster of houses of St. Remy, in two hours from the Convent. There we were detained for a short time at the Sardinian Douane, by the most civil and really agreeable douaniers it had ever been our fortune to encounter. The compactness of our baggage, and at the same time its varied contents and resources, seemed greatly to take their fancy: most of all, the "veritable English" portable side-saddle in its neat case, with holland skirt, whips, tethers, spare straps, ropes, &c.

While our passport was being *visé* I made inquiries as to the pass leading up the Val de Bosses and over the Col de Serena to Morgex, and so to Courmayeur in the Val d'Entrèves. Forbes merely names it as the only pass from Courmayeur which he had not travelled. From all we were able to gather, it appeared that it was but rarely passed, though practicable for a mule, and a long and stiff afternoon's work to reach Courmayeur before dark; parts of the ascent and descent being represented as exceedingly steep and difficult. The mountains were now clear to the S., and we therefore determined to try it, though some little time was lost in finding fresh mules, as our muleteer at first declined to go on, having reached home and lighted the pipe of contentment. At length he consented, and a mule was found to take E. up to the summit of the Col, or as far as the snow permitted; and the other, a sturdy animal, continued to carry the baggage. St. Remy is but a poor little cluster of châlets, at an altitude of some 5267 feet, embedded in thick forests of pine-trees, which are rigorously protected for the defence they afford against avalanches, which would otherwise overwhelm it. There is a very decent little auberge, where we fared sumptuously on new milk cheese made in a large wooden bowl, with sausage and excellent "gressins"—sticks of crisp bread peculiar to Piedmont, two feet long, and not thicker than a swan's quill.

After carefully packing and adjusting the baggage myself, we crossed the torrent-bed of the Buttier, leaving the St.

Bernard route on our left, and entered the Val de Bosses at 2 o'clock. In front of us were rugged and snow-streaked ridges, the Aiguilles du Midi, as our guide termed them, which must be a part of Mont Vertosant or Falère, marked Mont Fallet in the Sardinian map; and, on turning the shoulder of the hill, the range of the Serena came in view, at the head of the Val, its snow-covered summit fortunately clear, and promising us a prosperous passage at last, in recompence for our previous bad fortune. We ascended past several little hamlets, the chief of which is Bosses,—picturesque at a distance as they lay on the hill-side, grouped round their white campaniles—reminding us by their peculiar character, that we were now on the Italian side of the Alps. Our slope of the valley basked in the full warmth of the afternoon sun—which brought out a number of vipers—and was glowing with ripe corn; while on the opposite mountain side, facing the N., the sunless pine-forests and steep rocks lay cold and gloomy, in the deep shade of the higher crests. While halting near Bosses to look round us, we were delighted by a glorious distant view, between a long vista of mountains, up into the Val Pellina, its mountains tinted with soft violet and roseate hues.

Advancing up the Val de Bosses, the ground on our right had a singular and dreary appearance, being composed of a slaty shale, so much decomposed as to form a rubbishy black soil, covered with knolls; resembling a collection of old pit-mouths in some worn-out coal-field. Stunted crops of potatoes were growing in the stony rubbish, considerably above the average altitude of their growth—which Tschudi fixes at 5400 feet—seeming in the lonely valley as if they belonged to no one. I took the liberty of digging up sundry roots with my alpenstock, and found them quite free from disease, which we heard was generally the case, both in the Valais, and on the Italian side, for the first time for a long series of years. The vine disease also had nearly disappeared in the Rhone valley, but in Piedmont we found it universal.

A short cut across a swampy flat overgrown with rank vegetation, led me to a narrow bridge of trees across the torrent, where I was joined by the mules, which had made a détour by the straggling châlets of Arpetta. Here the real ascent commenced, the path rising abruptly through steep pine-forests strewn with cubical blocks of fine quartz, of all sizes, and variously tinged with red, yellow, and white. From among them sprang a profusion of the rosy-flowered rhododendron, then in full beauty, with graceful tufts of numerous ferns, especially the stiff shining fronds of the holly-fern, *P. lonchitis*, in unusual abundance and luxuriance. The blocks were fragments hurled down from the richly coloured crags, which towered above on our left, in a long range, apparently entirely of quartz, and extremely interesting from its compactness, and the wild forms which it assumes.

According to the Sardinian Government map, the Col de Vertosant passes behind this range, to Avise in the Val d'Aosta. The descent must be extremely steep on the other side; our guide seemed not to know much about it. The same pass in most maps is named the Col la Valette. The opposite range on our right is also variously named the Grande Rossère, and Mont Carmet. It is one of the points of triangulation in the Ordnance survey, which makes it nearly 11,000 feet, and this part of the ridge may perhaps be properly called the Grande Rossère, and the summit, seen from the neighbourhood of Courmayeur, Mont Carmet. There is much confusion in the maps. This mountain is singularly wild and fantastic, and I regretted not having time to make a détour of a few hours, to examine it more closely. The schistose strata seemed in one place to be forced up into an almost perpendicular position, forming a lofty edge of enormous jagged teeth, and this again had apparently been bent back each way, and torn open, forming a huge gap, and revealing the ranges behind.

Emerging from the forest, we came on a Highland-looking glen, in which, at a little distance to our right, were one or two huts, the last châlets, now however deserted. At the head of this glen rose successively two immense barriers of schistose débris, bridging across the valley, sprinkled irregularly with patches of pines. Up the face of this ascent we climbed in a straight line, and found it excessively steep and trying, especially for the mule, E. with difficulty keeping her seat in parts of it, though well accustomed to the saddle. When we reached the rocks on the right, before arriving at the snow, E. sent back her mule in charge of a stout peasant girl, who had walked lustily by it from St. Remy; and packing the saddle on the top of the baggage, we began the ascent of the last incline of snow. There were no tracks, showing it to be little frequented; and though the laden mule sunk now and then leg deep beneath the outer crust, it was not very easy footing on the steep slippery bed—of unusual extent that season—newly frozen after a partial thaw, and sloping rapidly down into the valley.

In 2½ hours from leaving St. Remy we stood on the top of the Col. The view into both valleys was magnificent: the Val de Rosses, which we had just traversed, overshadowed with a deep lurid gloom—dense storm clouds now rolling down the peaks on which the forked lightning was playing—inky torrents of rain sweeping along in the direction of St. Remy. On the other side we gazed with delight on the rich warm colouring of Italy, and the lovely scenery of the Val d'Aosta, bathed in the afternoon's sun, which glittered on the distant snow peaks and glaciers of Ruitors, and threw the deep valley into the softest purple shade.

The storm which had burst over the northern valley was fast gathering in from all sides to the Col, and the shortening intervals between the lightning flashes and the echoes of the thunder rolling grandly in the mountains, warned us to lose no time. I was thus unable to make any observation of the

altitude, but I estimate it at between 6000 and 7000 feet; the chief part of this ascent from St. Remy being accomplished in the last hour and a half.

On the southern side of the summit, numbers of brilliant flowers studded the scanty herbage, and almost under the snow on the black soddened soil, large patches of the fringed lilac flowers of the little *Soldanella alpina* greeted our eyes, of all Alpine plants the most graceful and charming. The yellow star of Bethlehem, *Ornithogalum fistulosum*, was dotted about in hundreds, rising not more than a couple of inches from the soil, with only two or three flowers on each stem, but of an unusually brilliant yellow. As we descended rapidly by the sloping pasture-grounds, the *Orchis albida*, and *O. nigra*, or *Nigritella angustifolia*, were growing side by side in profusion, amongst a host of other flowers too numerous to mention; and the vasculum was soon overflowing. The path below this, now became sufficiently well marked with the summer tracks of the goats, and the first sign of habitation was a singularly dreary and black-looking hovel, perched at a distance from us on a bare shingle, which proved to be a cheese châlet.

The baggage mule had unluckily cast a shoe, to the dismay of our muleteer, who had brought neither hammer nor nails, so we stopped at the next châlet, the head-quarters of a flock of goats, who were happily grouped on the stone roof. Luckily hunting up a rude pair of pincers, I made the guide draw a nail from each of the other three shoes, and, with the help of my geological hammer, we made the fourth sufficiently secure to reach the first village below. A remarkable gloomy gorge on the right, opened up into the fine ranges of the Grande Rossère or Mont Carmet, from which foamed a milk-white torrent of turbid water, down a wide desolate bed of débris. These sequestered glens and mountain recesses abound with chamois and game; their botany is as varied and interesting as their geology, and they would amply

repay a more leisurely exploration, making the upper châlets head-quarters.

As we got down to the forest, the declining sun was casting broad belts of light and shade through the stately pines, which clothed the richly tinted rocks on our left, or clustered on little knolls in gracefully feathered groups. A tiny cascade leaped down from the rocky ledges, among beds of rhododendron, dwarf pines, and luxuriant ferns; joining its waters in the hollow of the glen to an impetuous torrent, fringed with lofty spruce and silver fir. In the emerald-green meadows, lately mown, barelegged women were making hay in the picturesque costume of the Val d'Aosta,—a snow-white chemisette fringed with lace, and buttoned round the throat, with an open boddice, very short petticoat, and dark blue or red kerchief knotted round the head. As an Alpine scene it was perfect, the colouring like one of Poussin's boldest efforts; in addition to which, the glaciers of the Val Savaranches glistened high above the blue hazy outlines of the Val d'Aosta. The scent of the hay mingled with the cedar-like perfume of the pine-forests, and the murmur of the torrents chimed musically with the jingling bells of long herds of cattle returning home, followed by peasants, on gaily caparisoned mules laden with bundles of the fresh hay. All before us was sunny-looking and full of life, as the mountain-top behind was stern and gloomy; where black storm-clouds were now bursting in torrents of rain—the last we saw for many weeks.

During the whole of the descent we had the range of the Graian Alps in front, stretching from the Val Grisanche, S., to the Allée Blanche, W. The view of Mont Blanc itself was intercepted by the spurs of Mont Carmet, but a part of the mountains of the Allée Blanche were visible. One of the most conspicuous peaks was that of the Cramont, on which we looked with special interest; hoping ere long to stand on its pointed summit, and enjoy the view of Mont Blanc, which De

Saussure describes so enthusiastically. Below the Cramont is a remarkable conical mountain, called the Pain de Sucre or Mont Chétif, immediately above Courmayeur; to the left of these the valley of the Little St. Bernard opens up, and between it and the Val Grisanche are the peaks and glaciers of the Ruitor already mentioned, and those of the Grand Sante; the former from 10,000 to 11,000 feet in height.

Morges (not Morgex) was the first village we came to, and the rough narrow path through it, down which the mule slid, rather than walked, was like a street built on a ruined staircase; the people however looked happy and contented, saluting us most civilly, and helping to shoe the mule with an alacrity and good will, more to the purpose than the rude make of their primitive tools. Just outside Morges we came on the first of those frescoed chapels, or wayside oratories, which are so characteristic of Italy. The frescoes here were in true mediæval style: on one side of the door, St. George in the attitude of one of Froissart's knights, on a white horse, in full armour, with a white flowing cloak, was vanquishing an antique dragon, while the Virgin quaintly held out her hands in the act of benediction, a tremendous rosary round her neck reaching in wreaths to her feet; on the other side was the Madonna alone.

The valley now opened out beneath us in indescribable beauty, the river Doire, in a broad silvery belt, winding along the bottom of it; and at our feet the white cluster of Morgex, grouped round its campanile and embosomed in walnut groves. The picturesque castle of La Salle, perched on a rock to our left, above a slope of terraced vineyards, stood out in relief, commanding the vast amphitheatre. A straight narrow line marked the long road to Courmayeur by St. Didier, the last of which we could barely see, embedded in the mouth of a deeply shaded glen leading to the Little St. Bernard. A mass of fiery clouds like molten copper hung

over the Mont Cramont, crimsoned with the setting sun, while at the lower end of the valley to our left, the closing mountains were of a deep sombre indigo.

The descent, by a very rough and stony track, became trying and tedious, for, having severely sprained my knee, I, as well as E., who was also on foot, felt it as fatiguing as many much greater descents. Morgex seemed ever at our feet, and never nearer; the descent on this side of the Col being at least 2000 feet more than that to St. Remy. But the wonderful beauty and rich colouring of the exquisite scene in such an August evening, a few hours only from the cold grey Swiss Alps, would have compensated for ten times the fatigue.

Emerging from a glade of dwarf *Pinus sylvestris*, with underwood of savin and juniper, at a jutting point over a deep dell, we had a most extraordinary view into a vast rift, where the mountain precipice was cleft from the summit to a vast depth below. The sheer perpendicular precipices, on which not a blade of grass rested, gaped just wide enough to let a little stream gush through, which was quickly lost to sight in a lower chasm. This singular feature is of itself well worth a visit. At length through golden crops of rye and barley, little hamlets and irregular gardens, we reached the green meadows. A brilliantly blue *Delphinium* of dwarf habit, which we had also seen between Orsières and St. Pierre, here again attracted our admiration for its lovely colour. I never remember seeing it in our gardens, but it would be well worth growing; the seeds were abundant but unfortunately not ripe. Vines, trailing in graceful festoons over rustic trellises, embowered the path among the scattered cottages; luxuriant pumpkins with their great golden fruit straggled over the orchards; and by a beautiful little byway under shady walnut-trees, we entered Morgex.

Our muleteer tried hard to induce us to make Morgex our resting-place for the night, in which, however, he did not

succeed. Leaving him with the mule, for a short halt, to bait, we walked leisurely on to Courmayeur, luxuriating in the delicious coolness of the valley after the heat of the afternoon's descent. Twilight faded, and the stars now shone out with Italian brilliancy in the pure transparent air; Jupiter cast a sensible shadow, the milky way spanned the narrowed vault of heaven, like a bridge of light, from Mont Carmet to Mont Cramont; and the indistinctness enhanced the grandeur of the glens and mountains, investing them with a romance of mystery. On the grassy banks, glowworms glittered with a pale emerald light, and far below us on our left, we looked on the lights of St. Didier, twinkling at the bottom of a deep glen, where we heard, but could not see, the thundering waters of the Doire.

Grand as was the scene, yet all was calm and tranquillizing, and we were hardly prepared to credit our senses, when, as we advanced up the valley, what at first seemed to be a fantastic bank of white clouds, slowly resolved itself into the stupendous range of Mont Blanc; at an almost inconceivable height, and at only a few short miles distance, shutting in the end of the valley like an enormous ice wall, in cold relief against the serene sky. The starlight glistened palely on the gigantic mass of snow and ice, intercepted only by the dark cone of the Pain de Sucre. Once a brilliant meteor shot slowly above it, leaving a long train of light; and, as we gazed on its immeasurable ridges, the mind was lost in realizing the overwhelming sublimity of the scene. Our fatigue and hunger were almost forgotten in our rapt admiration of it.

We were only roused by Pierre and the mule coming up, when, after an ascent of two leagues from Morgex, we shortly entered the village of Courmayeur. Though only 10 o'clock, every one seemed to have retired to rest, but we found welcome and excellent quarters, *chez* Bertolini. The active landlord, who would hardly believe that E. had walked

down from the St. Bernard, and by the Col de Serena that day, spared no exertion or attention, quickly setting before our ravenous appetites a savoury dish of broiled mountain trout.

Before retiring to rest I opened the window to look once more on Mont Blanc, but an invidious pile of mountains shut it out entirely. Jupiter was dipping behind the sharp towering ridge of the Cramont—a long ray shot over it for a moment and vanished.

CHAPTER II.

VAL D'ENTRÈVES — VAL DE L'ALLÉE BLANCHE —VAL DE BELLAVAL.

Courmayeur — View of Mont Blanc range — Glacier of La Brenva — Present and former extent — Baths of La Saxe — Start for the Allée Blanche — Forest of St. Nicholas — Glacier of Miage — Lac de Combal — Flowers — Col de la Seigne — Châlets of Mottet — Chapiu — Descent of Val de Bellaval — Tarentaise — Bourg St. Maurice.

THE village of Courmayeur comprises ten small hamlets, with a united population of about 2250, scattered over the Val d'Entrèves, in one of the most exquisitely beautiful situations to be found in the whole of the Alps. Completely shut in by lofty mountains, it nestles at their bases in the bottoms of the narrow valleys, overhung with pine forests, among green meadows, gardens, copse-wood, and corn-fields which run up to the very foot of the glaciers. From the head village of Courmayeur itself, where we had established our quarters, Mont Blanc is not visible, until one turns the shoulder of Mont Chétif, at the head of the valley, but a portion of the chain, with the lofty Aiguille du Géant, grandly closes in the north. On the west, the frowning crest of the Cramont runs up like an inaccessible ridge into the air, the craggy face overshadowing Courmayeur, a sheer precipice nearly 5000 feet high; just below it, and to the right, rises the conical Mont Chétif or Pain de Sucre. On the south are the heights above La Thuile and the Little St. Bernard, and to the east the sharp ridges of Mont Carmet.

No mere description can do justice to it, nor can the wonderfully grand elements of its scenery be really comprehended in all their magnificence, until the eye has become in

some measure accustomed to them, and able to estimate their majestic proportions, after repeated excursions in the neighbourhood.

The morrow after our arrival was Sunday, and the repose was the more welcome, as E. felt somewhat fatigued after the descent of the Great St. Bernard and Serena, and my sprained knee gave me so much pain that I feared having to give up walking altogether for some little time. Leaving our quarters after breakfast, we took the road up the Val d'Entrèves towards La Saxe, in search of some quiet spot where we might spend the day; eager also to see the glorious vision of the night before, unfolded in the daylight. Groups of peasants were sitting on the low wall in front of the church, waiting for the commencement of mass—the men singularly habited in tailed coats of red cloth—some entirely dressed in the same red-coloured clothes, even to their stockings and knee-breeches. Just in front of the church was a large display of pottery, of quaint and primitive fashions, disposed on the road for sale—probably for the convenience of the peasants who came in on Sunday from a distance—a strange spot however to select for Sunday traffic.

The baths of La Saxe are only a short distance from Courmayeur up the Val d'Entrèves, and at the foot of the Montagne de la Saxe, whence the mineral waters issue at the remarkable junction of the limestone and intrusive granite, on which Forbes * has founded his interesting observations on the analogy of the rocks on either side of the Mont Blanc chain. The little bath-house, from which runs a streamlet of the milky sulphureous waters, stands in the midst of level green meadows, on reaching which the valley opens out. We had walked but a little distance along the fresh turf when before us, upreared in mid air, appeared that stupendous and overwhelming range of dazzling snow-peaks, which once seen can never be forgotten. Not a cloud specked the glistening

* Forbes, Travels in the Alps, chap. xi.

white domes, which, supported by abrupt buttresses of magnificent granite, seemed literally to overhang us; and below them snow-fields and icy glaciers, like torrents of crystal, streamed down each rift along the colossal range of precipice. Choosing a little knoll on the soft greensward, we read the services for the day, and sat for hours afterwards in reverent wonder and admiration of the sublime scene—the marvellous work of the Great Creator, who, in the forcibly appropriate words of one of the Psalms for the day, "in his strength setteth fast the mountains, and is girded about with power."

The air was deliciously fresh and pure, quite different from the northern side of the Alps, and the intervening masses of the Dolina and Cramont kept off the glare of the afternoon sun, which lit up the snow ranges with dazzling splendour. So deep was the transparent blue sky, that the apparent proximity of the snow-ridge, sharply cut against it, was startling. Mont Blanc appears on this side all but a precipice; from its summit down to the bottom of the valley where we stood is a sheer descent of above 12,000 feet, while along the whole ridge, from the Aiguille du Glacier above the Col de la Seigne, to Mont Dolent at the head of the Val Ferret, there is but one known accessible point by which it can be scaled —the famous pass of the Col du Géant. At intervals distant avalanches thundered down the crags, their rumbling roar the only interruption to the solemn silence, except the tinkling of the cattle-bells on the upper pasturages. Looking intently at the enormous masses of glaciers streaming down from the snowy heights, we could occasionally distinguish a train of white dust-like vapour, where some huge ice avalanche, loosened by the sun from the hanging glacier-beds, was dashed to powder in its descent.

We passed the long afternoon in undisturbed quiet and enjoyment. As the rays of the sinking sun retreated up the valley, fleecy clouds rose slowly from it, and before we left gradually enveloped Mont Blanc, the rose-tinged summit

lingering uncovered the last, soaring at such a vast height that imagination could hardly fill up the spaces between it and the valley, recently as we had seen the whole. The clouds crept slowly along the entire ridge, resting on it for the night, and mantling the now pale, silent glaciers with a dark grey pall—and not until then could we bring ourselves to leave the sublime scene.

On our return we found a party of Turinese, who were living *en pension* at the Hôtel Royal, very pleasant conversable people. The mineral waters of La Saxe and the neighbouring springs, and the purity of the fresh mountain air, attract each year an increasing number of Italian visitors, the great body of whom however frequent the more fashionable "Angelo." We were glad our muleteer had advised us beforehand of the respective merits of the two, and that we had chosen the quiet and comfort of Bertolini's, in preference to the pretensions and parade of the "Angelo." Our comfort and the attentions of our host could not have been greater.

One of the most interesting and magnificent objects in the more immediate neighbourhood of Courmayeur, is the Glacier of La Brenva, on the way up to the Allée Blanche; and though we did not examine it closely, or traverse it, until our return from a general tour of that Val, it will be more conveniently described here. Crossing the Pont des Chèvres opposite La Saxe, under which the Doire thunders with deafening fury, a gentle ascent leads under the base of Mont Chétif, which is in part composed of loose shale full of small cubical crystals of iron, and the pines which grow on this flank are remarkably poor and stunted. The bottom of the valley, in which the Doire is joined by its twin torrent from the Val Ferret, is a wide waste of enormous transported rocks, almost exclusively granite, interspersed with alluvial deposits, with here and there patches of verdure and bushes.

Through the tops of the pines, above the mule-track, the upper part of the glacier now appears, and after passing

the little chapel of "La Berrier," or "Notre Dame des Bons Secours," on the hill-side,—whither it was removed from its former site, having been ruined by the extension of the glacier in 1818—the path suddenly turns round the sharp angle of a projecting limestone rock, where the gigantic mass of rugged precipices and frozen billows of ice is seen in full front. This magnificent glacier, seen from here, consists of two distinct stages, above the highest of which rise the snowy crests of the Monts Maudits, where it takes its origin, and flanked in its descent on either side by lofty aiguilles of a dark purplish gray, between which stretches the impassable precipice of ice. The dazzling white face of the upper part is riven by a thousand deep chasms, shaded with a soft greenish blue, and seems pouring down like a vast frozen cataract of blocks of ice, until arrested half-way down, by a mass of rock in the centre, with a smaller one on each side. Over the centre one the ice-bed is forced in crashing avalanches, shivered into dust in their descent, and forming at the bottom of the rock a mass of powdered ice, on the darker surface of the again convergent glacier streams. From this point, the lower stage of the glacier almost bridges across the entire valley, supported on the outer edges, by a moraine, like an enormous embankment of steeply inclined rubbish, running right up to the foot of the cliff below the path. Sweeping round Mont Brenva on the inside, it takes a sudden turn to the eastward, and stretches away far down the valley; a succession of vast ice waves, rising at one point into two great cones, as if forced over some inequality in the glacier bed.

A deep ravine choked by rocks and débris, divides the glacier from the mule-track. A lofty bank of ice rose on the other side of it, down the face of which, numerous trickling rivulets were deeply furrowing the ice. From the path is an admirable view of the structure of the glacier, showing the extraordinary plasticity of the ice in adapting

itself to its bed; and the veins and bands of stratification are very distinct. The desolate surface of upheaving ice, all its original purity lost, dirty, and discoloured, is strewn far and wide with blocks of granite of all sizes, which are gradually carried onward by the advancing glacier, and shot at last over its melting edge into the desolate rock-strewn bed of the Doire.

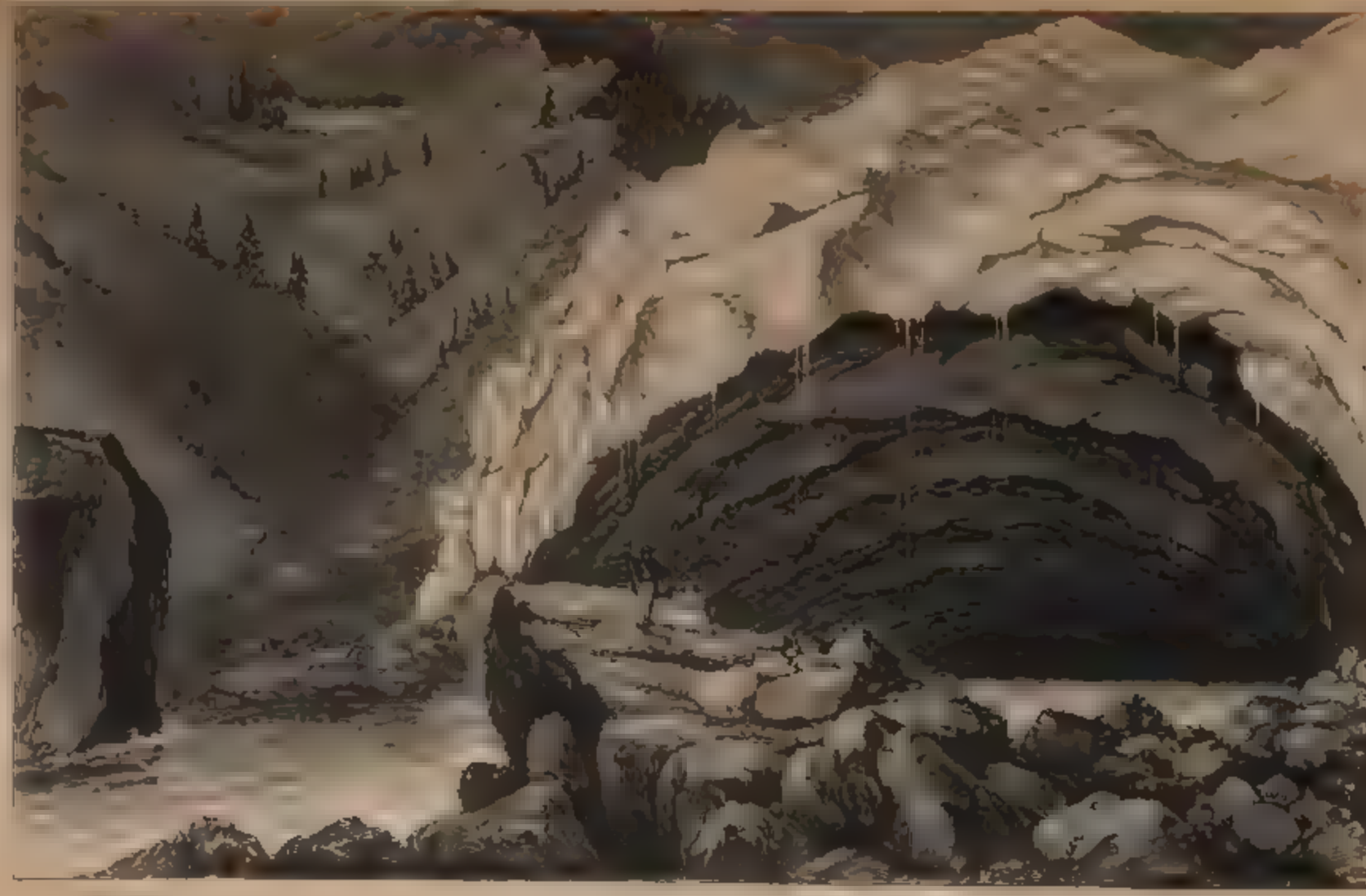
The river, which, descending from the Allée Blanche, had burrowed deep under the ice at the base of the moraine, reappears at the foot of the glacier, rushing out of an arched cavern In front of this stood a huge polygon of granite, bedded in the torrent, and forming so excellent a mark for noting the movements of the then retreating glacier, that I determined to reach it, and sketch its position. To accomplish this it was necessary to cross to the other side of the glacier, not difficult for a lady, guided by some one acquainted with the glacier, and taking due care of the slippery ice-mounds treacherously concealed under the tracts of rubbish and gravel. Any trouble, however, is more than repaid by the wild scene of wreck and ruin, of huge blocks strewn in every direction over the rolling waves, the shattered fragments of Mont Blanc and the Monts Maudits; while in the midst of this desolation the eye is startled on glancing from the snow peaks overhead, and the dreary ice under foot, to the ripe crops of golden corn round Entrèves, into which the glacier seems to plunge head foremost. The crevasses were deeper than I had imagined, and, our guide said, much more numerous of late years. There are but few minerals found on this glacier. I picked up only a few specimens of felspar and rock crystal.

With the help of Laurent Otto of Courmayeur, whom we had with us as guide, E. climbed over the chaos of granite blocks on the further side of the glacier, and we got down to the left bank of the Doire, close to the block I had noticed from above. It was of immense size, and stood just in front

of the mouth of a vaulted cavern of blue ice, deeply ribbed, through which the Doire rushed into the light. We stood on a pile of rude blocks which had been left by the receding glacier, and similar ones were embedded in the heart of the ice within the cave, or poised on the very edge of the ice above the cavern, falling into the torrent as they were loosened by the powerful sun. Streams of water were dripping over its edge, caused by the rapid melting of the ice. I attempted to get a little way within, wading up the torrent, but was speedily driven back by the shower of water and stones.

The year before, 1854, the glacier had touched this stone; now it had receded 50 yards from it; while five years previously, 1849, Otto assured me—difficult as it seemed to credit it, had not his account been confirmed—that it had all but reached the old moraine of 1818, many hundred yards lower down, and rose at the same time up to the pathway below the chapel of "La Berrier." In 1846 Forbes found the glacier much increased and approaching this moraine—an advance which he attributed to the great fall of snow in the two winters of 1843-4, 1844-5. In 1849 it attained its greatest extent, since which it has receded every year, and now has dropped down far below the path to the river-bed, leaving the hill-sides strewn with blocks. As an unusually heavy fall of snow had taken place the previous winter of 1854-5, it would be interesting to know what effect it has had upon the glacier, and within what time it became apparent. Otto confidently asserted that it was an undoubted fact, that the advance or retreat of the glacier goes on equally in winter as in summer.

I made a careful sketch of the position of the block of granite relatively with the mouth of the cavern and the chapel above, as shown in the wood engraving, and spent some time thus and in traversing the glacier and bed in various directions. A fierce torrent poured down from the Glacier du Mont Frety; and as we intended to return by Entrèves, it



THE GLACIER OF LA BRENVA—VAL D'ENTREVES

Notre Dame des Bons Secours

Ice Cavern of the Dora

was necessary to cross it—no easy matter for E., it being too deep to wade, swollen as it was by the great heat of the two previous days. As fast as we built out a pile of the heaviest blocks we could lift into the torrent, they were carried away by the force of the water; but at last, after some toil and great amusement, Otto and I succeeded, and, with the aid of a glacier-pole, she cleared it safely.

Climbing over the old frontal moraine, now thinly covered with herbage, we found ourselves at once in a broad patchwork of ripe crops, chiefly rye, with barley and some potatoes. Passing through the little hamlet of Entrèves, and crossing by the bridge over the branch of the Doire which descends from the Val Ferret, we reached the green meadows of La Saxe again. At the bath-house I stopped and had a bath in the milk-warm water, most refreshing after the glare of the glacier and the heat of the day. The baths are in separate compartments, simple, but neat and clean. They are made of pine-wood, and are lined with a loose sheet before the water is let in, which may be had hot as it issues from the rock, or cooled down at pleasure. Its effect is very pleasant and soothing to the skin, and after a hot day's walk there are few luxuries greater than a bath at La Saxe, and the cost is only 1¼ fr.

On the morning of August 13th Otto's pony, Tschitta, was ready as appointed at five o'clock, the side-saddle adjusted, and our bags strapped on in light marching order, for the Allée Blanche and the Tarentaise, leaving the rest of our baggage in Bertolini's care.

The sun rose above the mountain crest, and thousands of butterflies flitted among the dewy grass, as we mounted the mule-path under Mont Chétif, taking the route already described, as far as the Glacier of La Brenva. The whole range was clear, the fresh north wind only driving a few fleecy clouds over the highest points of the Grande Jorasse and the bare tooth of the Géant. We were met by num-

bers of mules descending with huge loads of hay, under which they almost disappeared, and so completely blocking up the narrow ledge of road, that E. had great difficulty in getting past with her pony, and had in fact more than once to dismount. The trappings of most of the mules in this district were remarkably handsome, decorated with a great deal of network and tasselled fringes of twisted leather, cord, and gay worsted, somewhat in the Spanish style.

On the pathway were lying large lumps of quarried ice, packed on little hand sledges on wooden runners, to be drawn down to Courmayeur for the use of the hotels. There is no fear of the supply ever failing, and I could not help thinking what an invaluable boon, such an everlasting and inexhaustible storehouse of this most rational of all luxuries, would be to our own country, could the ancient glaciers of Snowdon, the Cuchullins of Skye and others of the Western Highlands, coexist with the altered temperature of the present age.

Down at the bottom of the deep ravine, in front of the glacier, a peasant was at work cutting out the ice into large blocks, and slinging them by ropes on his back, he climbed with the heavy load up the steep ascent to the pathway. He wore a red coat—before noticed as the local dress—which contrasted comically with the ice-precipice at which he was at work. This "habit rouge" is one of the most singular costumes I remember to have seen—the coat rudely cut, with very stiff little tails, and "shorts" and jockey cap of the same colour. We were struck with its exact similarity to the scarlet dress of the barrel-organ monkeys, formerly more commonly seen in England than now; and it was evident that the Piedmontese itinerant musicians had borrowed the costume from their own native valleys, or the Savoyards had adopted it in caricature of their neighbours the Valdotians. They spin and weave the wool themselves, dyeing the cloth at home with the "garance" or madder, which grows in the valley. The long roots are dried, and, when boiled with a certain proportion of alum

and tartar, yield a red colour not very bright, but lasting. They wear the "habit rouge" universally in winter, but it is too warm for general use in summer.

A kind of promontory projects from the face of the cliff, covered with a few pines, and abutting on the moraine below. From this point is one of the best views of the valley both ways, the magnificent glacier, and the immense granite pinnacles of Mont Péteret. At the bottom of the upper valley, the Doire appears before it enters its cavernous passage under the ice, and apparently little less in volume than when it reappears. As the sun increased in power the roar of ice avalanches on Mont Blanc was almost incessant, and added greatly to the grandeur of the scene. At the bottom of the ravine between us and the glacier lay a mass of shivered pine-trees torn up by the roots, and hurled bodily into it by a spring avalanche from Mont Chétif. The forest was seamed here and there with wide gaps, made by the same destructive agency, after the last winter's heavy snow, their irresistible course where they had crashed headlong through the thick pines, marked by a melancholy wreck of shattered and prostrate trunks.

The path through the forest of Saint Nicholas is most strikingly beautiful and romantic, between ancient pines of noble growth, their feathered branches hoary with long pendent sea-green lichens, reminding me of a similar and little-known scene in the splendid forests on the ascent of Mont Pilatus from Alpnach, some of the finest I have ever seen. A rich profusion of ferns, chiefly *P. calcareum*, *F. fœmina*, and *Oreopteris*, with green mosses and herbage, carpeted the ground, interspersed with large detached rocks bright with many-coloured lichens. Near a very large one jutting on the path, was a break in the forest on our right, and through it one of the most exquisite views of the dazzling upper glacier in full front, its blue and white icebergs framed in the dark green pines. The moraine in

flank looks like a sloping viaduct of enormous dimensions, spanning the valley, and crested by the glacier. Its proportions seem stupendous, when one reflects that every particle of it has been brought down piece by piece, year after year, by the slow but ceaseless agency of the glacier, from the granite peaks 10,000 feet above it. The path gradually descends to the banks of the Doire, where on the other side are the ruins of a building formerly used for smelting silver, but now abandoned. The ore was procured from the Glacier of La Miage, but through changes in the glacier it has become so dangerous that the mines can be worked no longer.

On emerging from the forest into a level valley, where the Doire spreads out on a wide flat waste of boulders and gravel bordered with pines, the Glacier of Miage comes into view. The lower part only is seen choking up the valley above—a huge shapeless discoloured mass covered with débris. Turning to look back on the Brenva Glacier, the view of the moraine is more wonderful from here than at a nearer point, as it is better judged of in its relative magnitude to the lofty ranges between which it stretches. At this distance several monster blocks were conspicuous, perched on the top, the larger fragments generally having rolled down to the bottom, and completing the resemblance to an artificial embankment of chalky soil, the decomposed granite rubbish being at a distance of a bluish gray.

From the green meadows of the Val Veni, which we now traversed, fragrant with the cocks of new-mown Alpine hay, the Aiguilles of Mont Péteret present a peculiarly imposing spectacle. Pinnacle above pinnacle are grouped like clustering spires into one huge dome, which rises between and in rear of two double-peaked masses of colossal size, separated by a low transverse parapet. These, rising from the immense precipitous face, with the still vaster mass behind, present to the imagination the grand western

façade and dome of a sublime cathedral, designed by the Almighty Architect of the universe. It would make a grand subject for a painter.

Mounting the hillocks above the meadows, to the chaotic mass of débris at the foot of the Miage, a double glacier comes into view, pouring down a trough from the front of Mont Blanc, the remarkable peak of the Aiguilles Rouges rising in the centre, and dividing it into the two branches of the Frênez and Broglia glaciers, or, as Otto named them in his patois, the Tschitta and Comballet, the former lying under Mont Péteret, the latter under Mont Broglia. Far above the great glacier they are broken off abruptly, and shoot down their masses of rock and ice to swell the vast accumulations of the Miage below.

Crossing the Doire, we entered on a new and remarkable scene. The track leads under the outer moraine, which rises above on the right hand to an enormous height, its great rugged heaps comparable only to the ruins of an entire mountain. From the path down in a ravine, at the bottom of which flows the Doire, nothing of the glacier is visible, but a few projecting pieces of ice almost black. The rocks, stones, and moraine seem interminable, extending many hours' walk up to the mountain. Instead of diminishing, our wonder increased as we advanced, the great mound forming a deep gorge, half-way down which we wound through a maze of blocks interspersed occasionally with well-grown fir and larch, sufficient evidence of its age. Marmots were plentiful among the stones, their shrill whistle resounding in every direction, and with a gun many good shots might have been had. Otto's dog was furiously excited, and after a spirited chase we earthed one in such a position that, had we had time, we might easily have smoked it out.

At length the moraine turned abruptly round to the right, and the Val de l'Allée Blanche once more opened

out, disclosing new glaciers and scenes of wonder. A lake of a strange bluish milky hue, dreary as the Dead Sea, lay in the centre, dammed in by the stupendous moraine, which runs almost completely across the valley, at right angles; 400 feet above the level of the lake, and steep as stones can lie. It emerges from a deep impassable chasm of savage grandeur, penetrating as far as the eye can reach, into the awful recesses of Mont Blanc. At the point where we stood, the moraine and glacier turn suddenly to the east, barely admitting the Doire to run through. In all probability the moraine once stretched entirely across the narrow opening now forced by the Doire, and thus formed a noble lake, presenting the singular spectacle of the upper glaciers thrusting their ice masses into the very water; as in the Chilian Andes, where the glaciers pour down into the sea at the head of every bay.* At length, however, the barrier gave way at its weakest point, where the moraine, as in the case of the Brenva, rested against the opposing mountain base, probably causing such an inundation in the valley below, as took place in the Val de Bagnes, on the giving way of the Glacier of Gétroz.

The desolate shores of the lake, melancholy and barren as they looked on first approaching it, were, we found, carpeted by the most brilliant profusion of flowers, of such vivid colouring as can only be seen in the High Alps, where the pure air and intensely blue sky seem to impart their own splendour to the very flowers. Prevented by the snows, winds, and cold, from springing to any height above the warm earth, the mean temperature of which, during the winter, is far above that of the atmosphere even until May, their growth is dwarfed, but the concentrated energies of the well fed and protected roots, working in the rich soil covered up with snow, are chiefly expended in the perfecting of the flower and the seed, the great functions of the plant. The

* Darwin's Journal, p. 283.

consequence is a richness and vivid hue of flower, partly owing also to the intensity of the light, with a compactness of growth which the most skilful florist may well envy. In the higher Alps plants, which in the plains would attain a height of a foot or more, may be seen with two or three inches of stalk and a monstrous bloom; indeed nothing can be more characteristic of a true Alpine plant than the lovely *Gentiana acaulis*, whose dazzling blue bells are so disproportionately large, compared with the tiny leaves and rudimentary stalk. Any one who has seen the "Jardin" in the heart of the glacier of Talèfre in its season of greatest beauty, will vividly recall the extraordinary and brilliant blooming of the dwarf plants which flourish on it at a height of 9900 feet. In the Arctic regions the same effect is observed.

The snow had only recently melted on the shores of the Lac de Combal, still lying in large patches here and there, and it was joyous spring time, the air perfumed with the scent of the thousands of flowers which enamelled the ground. A perfect mass of the delicate lilac *Primula farinosa* covered a large plot, and all around us were tufts of the fairy *Soldanellas*, numerous species of *Campanula*, the lovely blue *Linus*, yellow violet, white *Pinguicula*, white, yellow, and globe *Ranunculi*, the great Alpine columbine, sulphur-coloured anemones, blue-eyed forget-me-nots, purple vetch, pansies, cistus, gentians outvying the azure sky overhead, the "*Rose des Alpes*"—the crimson rhododendron—covered with bloom, and a host of others of botanical interest far too numerous to mention. In the midst of this lovely garden we chose a spot for our mid-day halt, turning Tschitta loose to graze, while we satisfied our own keen appetites. The day before, being the 12th of August, we had got a brace of ptarmigan in lieu of grouse, and had them cooked to carry with us. As we now picked their savoury bones by the Lake of Combal we drank

to the health and success of our friends on the Highland moors, in sparkling Asti, iced with the snow from a bed behind us.

Beyond the limits of our little oasis all was grandly wild and desolate, silent as death, except the rumble of a distant avalanche, or a marmot's whistle. The only traces of trees were a few miserable stunted larches on the black slopes behind, while patches of cotton-grass alone broke the monotony of the milky waters of the still lake. On the opposite side in face of us rose the Montagne de l'Allée Blanche, capped with a cone of snow, called sometimes Mont Suc—an appropriate name; "Suc," in the local *patois*, the same as "Zuccone," meaning "baldhead." Between this and the Aiguille de Mottet are the magnificent blue-rifted glaciers of Tschelletta and Allée Blanche, and above us to the extreme left at the head of the Val the snowy crest of the Col de la Seigne, the point where we were to pass marked by a cairn of stones. To the right was the gigantic mass of Mont Blanc with its subordinates, into the bowels of which penetrated the dark mysterious chasm from which the vast embankment of the Miage is seen issuing. Above the great glacier are those of Broglia and Frénez, and Mont Péteret, with the Géant and other peaks in the distance. There is nothing on the Chamouni side to compare with the wildness and sublimity of this scene.

We took a long botanical ramble, and filled the vasculum with the choicest specimens we could select, no easy matter where all were so beautiful. The day was now overclouded, and but few insects were to be seen, chiefly *Hipparchias*, but the extraordinary number of larvæ which swarmed on the plants and stones showed that at a favourable time the entomological fauna of the district would be found as rich as its flora.

Starting again, we continued along the bed of the lake which formerly filled the valley, now bare stones and rubbish,

seamed with glacier streams, and dotted with patches of snow. The Glacier of Tschelletta is beautifully seen in its full extent of dazzling purity, from its snowy cradle down to the foot, with only one medial moraine, which brings down but little *débris*, hardly showing until it discharges itself over the edge. Mounting a steep ascent towards a few châlets, from which is a magnificent view back of mountains, glaciers, lake, and moraine, at the top is a long wild valley, the bottom a flat stony level, and probably once a lake also. Passing under the remarkable "Pyramides Calcaires," one of the most prominent features of the pass, we found the head of the valley closed in by the connecting ridge, between the ranges of mountains on each side of the valley, uniting the Pennine with the Graian chain. The rifts with which its shaly surface is deeply scarred are of a remarkable blue tint, staining the snow which veins them, of the same colour.

At 2 o'clock we got up to the snow, and, crossing a little stream, the source of the Doire, reached the summit leisurely in half an hour. Since noon "brouillard" had partially settled on the mountains, but it cleared enough to show us the splendid view backward, perhaps enhanced in grandeur by the great masses of cloud which overcanopied without concealing the highest peaks, and cast a gloomy shade on the valley, deepest in the far recesses of the distant Val Ferret. The Lac de Combal below us was of an unearthly greenish blue, while the mass of moraine seemed to lose nothing of its enormous size in the distance. The Col divides Piedmont from Savoy, and the snow on which we stood was slowly melting away, its waters streaming down as chance inequalities in the ground directed—either to the western side, where the tributaries of the Isère carry them down to the Rhone, ending at last in the stormy Gulf of Lyons—or on the other to the Doire, and thence by the Po and the still Lagune, to wash the sea-girt palaces of Venice.

We stayed on the Col as long it was endurable, the air

being now bitterly cold, and then began the descent of the other side towards Chapiu. Traversing a dreary moorland tract, the path lay far below us at the bottom of the savage and desolate Val de Bellaval, without a vestige of a tree, the gloomy mountain-sides deeply furrowed with watercourses; and the blue colouring of the shaly rocks very remarkably combined with the fields of snow and patches of scanty verdure. Over the distant and lower slopes of green pasture opposite they were assembling the cows to the "Ranz des Vaches," a series of five rows of little hollows in the turf, where the cows to the number of 120, as I counted them with my telescope, were picketed for milking. It was early in the day, but the milking hours at the châlets of the high Alps are 7 A.M. and 2 P.M.; in the winter 8 A.M. and 6 P.M. The breed of cows in this valley was unusually distinct, some of them extremely pretty animals, small, and resembling the Guernsey in many of their points.

The Glacier of Mottet, descending from the fine Aiguille du Glacier, the extreme outlying peak of the Mont Blanc chain, rests on a slope of high red rocks, on the north of the valley, its bright-blue crevassed ice pure to the very edge. While we were admiring its beauty, a magnificent lammergeier rose slowly from the crags above, and soared for a long time over the valley in wide graceful curves, looking of immense size even in such grand scenery. Not a marmot's whistle was to be heard while their enemy was in sight. The precipitous descent was by rubbishy hills of decomposing black shale, barely covered with a little moss, and extremely steep for a mule. As I raced down them full speed I was unexpectedly joined by a flock of goats, who clattered down after me, sending stones and rubbish flying about my ears, and I had some trouble in getting rid of them, so anxious were they for the expected salt with which the shepherds coax them, licking my hands as soon as I let them approach.

A deep gully or fissure just above Mottet shows an excel-

lent section of the shaly beds, which slope towards the south-east by east at an angle of 45° at the least. We were quickly down at the châlets, which are still "Chez Miedan Gros," the descendants of those "bonnes gens" who entertained De Saussure in the same place in 1781, and whose simplicity, independence, and hospitality he describes so charmingly. He arrived at the time when a newly married son and his bride were on a visit, and the little châlet was full; but they found the philosopher a corner in the hay-loft, and shared with him the lamb which had been killed in honour of the young couple. Of late years it has been improved and plainly fitted up for the accommodation of occasional travellers, and the "Ancien Hôtel des Mottets," as it aspires to be called, is infinitely preferable to Chapiu as a resting-place, and the traveller will do well to choose it as his quarters. The windows were decorated with green shutters, the walls "couleur de rose," and even the ceiling rejoiced in a little fresco border in Italian style. The furniture was merely three clean pine-wood tables, with a couple of long benches to each, and in a little room beyond, three deal bedsteads and good straw shakedowns. A benighted pedestrian might think himself fortunate to stumble on such a refuge in this savage valley. Under the same roof was another hospice dedicated "Au repos des Voyageurs, chez Villien;" but we did not enter it, and after a draught of new milk continued our way down the valley.

There is only room at the bottom of the wild ravine for the torrent, which seemed as if it had eaten for itself a way down in the solid rock. The pathway is a narrow ledge carried high up along the mountain-side. From it are grand views of the stern but monotonous scenery of the savage glen. The track lay among immense quantities of blocks which strew the mountain, and I could not resist indulging in an old amusement of boyish days, and set to work to roll them down the precipice. Otto, when he first

came up to me, was somewhat surprised and amused, but he soon entered into it, and we worked away together vigorously at an enormous block poised on the edge of the path. The huge mass was difficult to set in motion, and Otto, in his ardour, nearly went over head first himself; but once started, it plunged down with frightful velocity, humming and bounding into the air, fifty yards at a leap, until, with a sudden crash which splintered it into a thousand fragments, it plunged into the rocky torrent at the bottom of the deep gorge.

Amongst the rocks and stones flourished a profusion of beautiful ferns, the distribution of which, according to the rapidly-diminishing degrees of altitude, was very interesting. At the highest elevation at which we met with any of them, the only one was *Asplenium viride*, very stunted, on some large rocks in the pastures just below Mottet; and a little farther, *Cystopteris fragilis*. Lower still we came on *Allosorus crispus*, first sparingly scattered and then in rich profusion, its beautifully curled fronds nestling in dense masses among the stones. Next succeeded *Pol. calcareum*, very fine; and below it again, *Pol. phegopteris*, and then *dryopteris*. Some distance lower the larger ferns were first represented by *Filix mas.*, then *Filix fœmina*, and *L. multiflora;* and last of all, quite contrary to what I should have been led to expect from its habitat on the highest mountains in Scotland, the beautiful *Pol. lonchitis* or holly fern. I do not assert that this distribution is exact, nor that a more general and leisurely examination might not find exceptions; but this sequence was that in which they occurred under our own observation.

At the bottom of the gorge we dropped down on Chapiu, a dreary little cluster of stone cabins of the most wretched description, surrounded by their outbuildings, with a strange little chapel; standing, in De Saussure's expressive words,*

* Voyage 2, § 766.

"in one of the most horrible situations at the bottom of a funnel, surrounded by lofty mountains, naked and savage, at the confluence of two torrents which desolate the whole neighbourhood." His servants were so terrified with its horrors on their descent from the Col du Bonhomme, that, anticipating still worse in the Allée Blanche, they mutinied and would have returned over the Col rather than face it, but for his firmness.

Certainly anything more desolate and utterly isolated from the world can hardly be conceived, and the miserable huts of which it is composed are in keeping. Two of them, however, offered accommodation—one under the title "Des Voyageurs," the other "Au Soleil," and between them we had to choose for our night's quarters. Though Chapiu lies at the foot of the Col du Bonhomme, the few travellers who pass during the short summer can hardly cover the expenses of one, much less two, inns. Our arrival was evidently an event, and the two rival hostesses came out, attired in the singular head-dress of the Tarentaise, each anxious to secure us. We willingly complied with the requests of both to go in; and after taking a careful survey of the comparative merits of each, were attracted to the "Voyageurs" by a decent-looking pallet bed, with a deal table and benches, in a little room up a ladder; to the discomfiture of the hostess of the "Soleil," which, with its bare, dirty rooms and iron-grated windows, was then little better than a common lock-up.

Our hostess was anxious to make us welcome, but we had to wait long for supper. The atmosphere felt cold and raw as a dungeon after Courmayeur, and wood was a very scarce and precious article; but I found out the store and soon made a bright blaze on the hearth, and, lighting the candles we carried, beguiled our hunger in arranging the plants collected during the day, and reducing and labelling geological specimens. At length a good omelette appeared

with excellent potatoes: some rough red wine from the Tarentaise was the only drink to be had; however, with spices and sugar from our stores, and the portable saucepan, we mulled it, and kept out the cold, which we felt keenly. Meat is as scarce here as wood, the price of a sheep weighing 60 pounds ranging from 15 to 20 francs, ordinary lean cattle about 50 francs, and for superior animals as high as 200 francs. The demand for supplies for the Crimea had increased the price of all animals, and mules especially were trebled in value.

We slept soundly on our hay beds, and next morning were ready to start soon after daylight, paying 12 francs for our entertainment; certainly not for value received, but a fair enough charge taking into consideration the few travellers during the brief season when the passes are open, and the distance from which every article of consumption has to be brought.

A splendid sunrise hardly redeemed the gloom of the place; the cold white glaciers and the outworks of Mont Blanc closed up the stern valley which we had descended the day before, and the glen which widens out into the lower Val de Bellaval was strewn with stones and alluvium far and wide. Chapiu stands slightly raised above this dreary waste, which is completely covered by the glacier torrents at the time of the melting of the snow in May and June, when it must appear like a lake. The rugged ribs of the lofty Mont Neuve and other mountains rise directly from the deep glen without tree or shrub. The Col du Bonhomme, which lay behind us, does not look so difficult from this side, appearing through the telescope to be a succession of green knolls and hollows filled with snow, a white pole near a mass of rock marking the summit.

The gorge of Bellaval, after leaving Chapiu, is profoundly desolate and savage, in which respect few Alpine valleys can equal it. Not a vestige of a tree varies the wild rocks

which overshadow it, and along its stony bed there is no vegetation beyond a little scanty herbage and moss, strewn with great blocks detached from the overhanging cliffs. The limestone rocks are beautifully tinted, and some fragments of a loose shaly structure were full of cubical crystals of oxidulated iron of various sizes, as in the similar beds under the base of Mont Chétif.

The first tree was a lonely larch, perched on a beetling crag at a height of many hundred feet, its dark outline singularly distinct against the yellow-tinted rock. Probably it was at one time not alone, but its companions had fallen victims to the axe, from which its inaccessible situation had saved it. On the cliffs on the right were interesting sections of remarkably contorted rocks, slate intervening. Further down the Val a plank bridge which crosses the stream where it rushes through a narrow rift, resting at one end on a huge-detached rock, leads to the stone huts of Le Clerc; more like a cluster of cabins in Skye than a Savoyard village. A wooden cross on one of the rocks records a plenary indulgence from one of the bishops of the Tarentaise to pious visitors.

From this point we had a fine view into the valley below, as the fleecy clouds rose in the morning sun from its dark depths, through which the Isère thunders in a narrow rocky bed. The aspect of the scenery changed; pine woods began to clothe the steep slopes, and at the further end of the valley the beautiful Aiguille de la Vanoise just peeped above the nearer ranges with its glistening pyramid of smooth snow, and shortly the whole group came into full view. Along the track deciduous trees, such as the Alpine alder, and grassy hills and slopes, succeeded to the barren wastes we had just traversed; the morning sun shone warmly, and a profusion of butterflies woke into life, increasing in numbers as we descended.

The first that appeared soon after the sun rose above

the mountains, was the noble *Parnassius Apollo*, with its cream-coloured semitransparent wings marked with scarlet and black-ringed ocelli, always associated in the Alpine naturalist's memory with the grand scenery of the lofty mountains which it loves to haunt. They abounded here, sailing gracefully from flower to rock, so fearless that when settled they would allow one to touch their wings with a hand net before they would move, and then darted with astonishing swiftness far down over the edges of precipices into the deep valley, making one long for their powers of flight. With the *Apollos* were thousands of *Polyommati* of five or six species (*Corydon* and *Argus* most plentiful), their beautiful bright blue wings literally studding every patch of bloom. *Hipparchias* were numerous considering the lateness of the season, especially *Galathea*, and I captured some thirteen species in the morning's walk. Lower down the valley in sunny nooks these were joined by Clouded yellows, brilliant red Coppers, and silver spotted Fritillaries, most of them freshly emerged from the chrysalis. In phænogamous plants we found nothing new, and there were extremely few ferns.

At Bonneval the two valleys of Bellaval and Bonneval unite, and the little village is romantically situated at their junction, surrounded by orchards and rich meadow slopes under lofty cliffs of darkly-waving pines. A mountain torrent issues from the narrow opening into the Val de Bonneval, fringed with fine birch-trees, a wooden bridge spanning its roaring course where it joins that from the other valley. Thus reinforced it becomes a fine stream, the bright blue waters foaming and sparkling in the sunshine, most refreshing to the eye in the increasing heat of the day. It is sometimes called the Isère, of which, however, it is only a branch, and in the maps is designated as the Glacier or Chapiu torrent. The path, which crosses to the right bank of the stream, descends very slightly compared with the

rapid fall of the valley, as it is so extremely contracted that it is necessary to keep high up: consequently the depth between the track and the bottom of the glen is constantly increasing, until, after a short hour's walk, the torrent is seen foaming at a vast depth below, at the bottom of a lofty precipice. From this commanding point the wide valley of the Tarentaise opens out, with a distant view of Seez and St. Germain, and the snows and glaciers of Tignes, Mont Iseran, and the Vanoise.

The transition in the vegetation is rapid; and passing through a little village and under the refreshing shade of fine walnut-trees, we dropped quickly down among terraced fields of ripe corn, potatoes, and even maize, to the swampy-looking plain, studded with poplars. Reaching the broad level road which runs through it, we found it fearfully hot and close, and after about a mile's walk were glad to reach the little half French, half Italian looking town of Bourg St. Maurice, the capital of the upper Tarentaise. Here we halted at noon, preparatory to starting for the Little St. Bernard, so celebrated as the line of Hannibal's passage of the Alps.

CHAPTER III.

VAL DU PETIT ST. BERNARD.

Hannibal's passage — Controversy — Evidence in favour of Little St. Bernard — Bourg St. Maurice — Costume of Tarentaise — Ascent of pass — "Rocher Blanche" — Hospice — Antiquities on plain — Geology — La Thuile — Avalanches in gorge — Mont Cramont — View from summit — St. Didier.

THOUGH the controversy has from time to time been revived as to whether the Little St. Bernard or the Mont Genèvre, the Col de Sestrières, Monte Viso, Mont Cenis, or others still less probable, were the point by which Hannibal effected his famous passage into Italy, the general mass of inferential evidence, since the investigations of General Melville, followed by the works of De Luc, Messrs. Cramer and Wickham, and numerous other writers, was so clearly in support of that of the Little St. Bernard, that the question might be considered as fairly settled. The able modern historian of Piedmont has however, and I think unfortunately, revived the controversy, by unhesitatingly giving the weight of his authority "to the Piedmontese version in favour of Mont Genèvre."*

The account of Polybius, clear and truthful, and aided by his personal knowledge of, and travels over, the same Alps only 60 years after Hannibal's passage, and, as he states, for the express purpose, is now almost universally admitted as the only reliable one; Livy's confused and irreconcileable narrative being manifestly but a garbled and interpolated paraphrase of Polybius, with the object in view of fixing the passage on

* History of Piedmont, Antonio Gallenga, vol. i. chap. 2.

Mont Genèvre. This opinion Gallenga also adopts, following M. Letronne and the Chevalier Folard.

The main question, as far as speculative arguments are concerned, appears to me to hinge on what route the emissaries of the Cisalpine Boii and Insubres would be likely to take on their way to meet Hannibal, and invite him to make common cause with them against the Romans. By the same route which these messengers took on their way over the Alps into Gaul, the probability amounts to a certainty, that, in the absence of local difficulties insuperable to an army, they would guide or direct Hannibal's advance. The question then so far depends on which line of country was both most convenient and most friendly to their design; and then, whether that route agrees in its features and position with the facts and descriptions of Polybius.

As the district of the Insubres extended along the north side of the Po up to the foot of the Alps, and they were only separated from the Salassi of the Val d' Aosta by another minor Gallic tribe, the Libui, the shortest and readiest means of communication for these tribes with Gaul was naturally by Ivrea, the Val d'Aosta, and the Graian Alps. But in addition to this reason was a stronger one for their choosing this pass, resulting from the relations of the several tribes who held the country between the Allobroges and themselves. The Cisalpine tribes of the Insubres and Boii of the plains of the Po and Milan, with the Libui also,—like the Allobroges, the nearest Transalpine Gallic tribe, and who inhabited the "island" included between the Rhone and the Isère,—were all of them Gallo-Celts, who in their habits and choice of location were always Lowlanders. But the pure Ligurian tribes of the old Celtic family, such as the Salassi, Taurini, Centrones, Graioceli, and others who dwelt on the steeps on either side of the intervening Graian chain, were of the first migration—Highlanders, in the true sense of the word, hardy mountaineers, whose only limit on their native Alps was the snow-line.

On a review of the history of the eight years previous to the second Punic war we find the aboriginal Celtic tribes of North Italy, and among others the Ligurian tribes of the Taurini of Piedmont, and the Salassi of the Val d'Aosta, leagued together with these immigrant lowland Celtic tribes of Gallic origin—amongst whom were the Insubres and Boii—against the Roman legions, in the Gallic war which lasted for four years, and terminated, B.C. 222, in the complete discomfiture of the allied Celts. After that period the Taurini and other Ligurians withdrew from this alliance, to the Romans, to whom from motives of fear or policy they attached themselves; and were so far hostile to the Insubres as not only to be no parties to their invitation to Hannibal, but Polybius* tells us that Hannibal afterwards warred against them because they were preparing to attack his Insubrian allies. But we have no evidence whatever of the Salassi having broken their alliance with the Insubres, and motives of self-interest would prevent it, their fastnesses in the Val d'Aosta debouching on the Insubrian plains. By the Val d'Aosta and the Graian Alps, therefore, the communication must naturally have been kept up between the latter and the Transalpine Gauls. The other Ligurian tribes, as the Centrones, Graioceli, and Medulli, who held the mountain fastnesses between the two, being of the same stock as the Salassi, would no doubt allow the messengers of the Insubres, the allies of the latter, safe and free conduct over the pass as heretofore.

Nothing could be more improbable, on the other hand, than that the messengers would endeavour to reach Hannibal, especially on such an errand, through the declared hostile Taurini, as must have been the case had they taken the route of Mont Genèvre, as accepted by Gallenga and others. Not only would it have been most impolitic for such a deputation to have attempted to pass through a people who were not only their known enemies, but also the allies of Rome; but

* Polybius, lib. iii. 60.

still more unlikely is it that, if there were a possibility of avoiding it, they or his guides should conduct Hannibal and his army the same way back—when, immediately on his descent on the plains at the foot of the Alps, he would be engaged and harassed by the Taurini, instead of resting quietly to restore his army as we know he did. Nor again can we suppose that Hannibal, who "had made such exact inquiries, and conducted his enterprise with such consummate judgment, with guides and conductors through the difficult passes that lay in his way, natives of the same country, men who were to partake of the same hopes with himself," would ever have committed so serious a blunder as to advance with his unwieldy army up to Vienne and the country of the Allobroges, and then turn southward again to cross the Mont Genèvre; when he might have reached it direct from Avignon by Embrun and Briançon, one half the distance and by the plains.

It is true that, supposing him to have taken the Graian pass, an attack was made by the Centrones in a position of great difficulty, as he entered the gorge of the Reclus. But Hannibal had been prepared for this and other difficulties by his guides, who would know the people well, and he accordingly held them in great doubt and mistrust. The Centrones however had come out to meet him with the most friendly signs and offers, gave hostages, and furnished cattle in abundance; and when Hannibal's cautious suspicions were thus somewhat allayed, and he accepted their services as conductors, he was suddenly attacked by them in a deep ravine, where he suffered considerable loss from their hurling stones down from the heights above; but when he had extricated himself from this difficulty, we hear of no further opposition or annoyance from any of the Highland tribes, and he descended unmolested to the plains within easy march of his Insubrian allies. Thus we see that there was no more opposition encountered by this pass than Hannibal, with so large an

invading army, would have calculated on, or than he met with in previous parts of his route; for whichever pass he took, we know that he was attacked on his ascent by the Ligurian tribes, as he had been before by the Allobroges of the lower plains.

Nor was there anything in the nature of the Graian pass to deter a general of his daring from leading his army over it. We are in fact told that his guides had declared the passage of the Alps to be indeed very difficult and laborious, but not at all impossible. After the gorge of Reclus, at the foot of the pass—and which exactly agrees with the ravine, difficult of access and closed in by steep and rugged heights, where he was attacked near the famous "white rock" of gypsum—the chief local obstacle would be the passage of the narrow defile, choked with snow avalanches, at La Thuile, and this would be a serious one. However, in singular confirmation of our position, it exactly corresponds both in its nature and locality with the very obstacle which is stated to have delayed Hannibal three days in clearing the snow and reconstructing the path thus destroyed, for the passage of his elephants, beasts of burden, and troops. And the correspondence is the more striking since Polybius evidently mentions the destruction of the road as having constantly occurred before, though to an unusual extent at the period of Hannibal's passage. Down to modern times this has been so precisely the case in the same gorge of La Thuile, that the ancient road has been ultimately abandoned to the avalanches and snow-beds, and a new one quarried high up the opposite rocks!

Whatever may have been the inconveniences of this route, we can satisfy ourselves that they are such as Hannibal did really encounter; and however easy and practicable the Mont Genèvre may be, its advantages in that respect were as nothing, when one takes into account the very different consequences to Hannibal's army, of landing at

once among his enemies the Taurini, or his expectant allies the Insubres.

To prove the entire correspondence of the features and nature of the route by the Little Saint Bernard pass, with the description of Polybius, a host of confirmatory evidence might be adduced, which however may be found at length in the numerous works published on the subject, especially in that of Messrs. Cramer and Wickham. One point however remains to be noticed on which Gallenga has laid some stress. He objects * that—supposing Hannibal to have reached the plains at the foot of the Alps, by the Graian Pass, as near Ivrea, and within call of his Insubrian allies, who were soliciting instant aid, while Scipio was already on the Po and Ticino—it is hardly probable that he would have lost three days in storming the city of the Taurini, if he had to diverge from his road which would have led him from Ivrea to Vercelli. But we are distinctly informed by Polybius † that Hannibal encamped at the foot of the Alps for a long enough period to recruit and refresh his army, and restore the men and horses to their former vigour and condition, after the sufferings and hardships they had undergone; having been starved from want of provisions and forage, in addition to the difficulties of the pass, all which had so affected his troops that they had lost all energy and courage. When however they were sufficiently recovered, he first invited the Taurini, who were then at war with his allies the Insubrians, to enter into alliance with him, and on their refusal he besieged and took their city in three days. There is no ground for imagining that these three days would have been any loss of time to him. On the contrary, the restoring and reorganizing of his army, exhausted as it was, must necessarily have occupied some considerable time, and a detachment of his army would have sufficed for the attack on the city of the

* Vol. i. p. 13. † Lib. v. c. 60.

Taurini (the modern Turin), which is within easy reach of the plains between Ivrea and Vercelli. The operation under the circumstances showed in fact the skilful strategy of a great general, and Polybius says that the result was, that by this measure he spread such terror amongst the neighbouring barbarians, that they all came immediately and surrendered at discretion. His rear was thus left unembarrassed, and the supplies he would obtain from the plunder of the city and country of the Taurini would moreover be an advantage Hannibal was not likely to overlook. "After this Hannibal judged that he ought, without loss of time, to move forward, and achieve something for the purpose of giving confidence to those who were desirous of making common cause with him."

In all this there is clearly no haste, such as would make the loss of three days of the slightest importance, considering the object to be obtained by it: but it does certainly seem inconceivable that, if Hannibal crossed the Mont Genèvre and found the city of the Taurini lying in his path—for he must have come on it almost immediately after he arrived at the foot of the Alps—he would have been allowed by this hostile tribe to have rested his army, disorganized and partly demoralized as it was, after all its sufferings and the loss of 36,000 men; being, as we are told, in the utmost distress, and brought to a state more resembling that of wild beasts than of human beings. Still less can we suppose him to have procured provisions and forage for so long a period, until they were strong enough to challenge and attack the hostile people, among whom he had been repairing his losses and weakness without molestation! This we repeat seems utterly inconceivable, nor can we imagine a general like Hannibal voluntarily placing himself in such a position, as his Insubrian guides must have fully informed him of the state of affairs, and the disposition of the Taurini with regard to him and themselves. From such insur-

mountable difficulties as these, the supposition of the descent by the Graian Pass is entirely free, and moreover, as has been proved long since, is in complete accordance with the account of Polybius.

But there is one argument which is more conclusive than any other; and to my mind indeed final. The scholar and the historian may draw opposite inferences, to support conflicting theories, from doubtful passages or imperfect information; but physical facts can bend to no such ingenious reasoning. Polybius states that "there was already snow on the summit of the mountains, as it was now near the setting of the Pleiades" (according to Dr. Maskelyne about the 26th October), and on the descent the snow caused great loss, rendering it impossible to distinguish where they were to place their steps, and when they wandered from the track they were lost in the precipices. Still further down the descent they at last met with the obstacle already described, where the narrow defile was choked with the hard accumulated snow of former seasons, covered with what had recently fallen; and the road destroyed for a stadium and a half, or some 300 yards, which it cost him three days' delay to repair so that the elephants could pass. Now, no one at all acquainted with the Alps can, by the greatest stretch of imagination, transfer this very graphic picture to the Mont Genèvre in the latter part of October, where even waving crops of barley ripen on the very summit, on the plain round the village of Bourg Mont Genèvre; much less can we imagine any part of the road, ancient or modern, far down the descent towards Italy, subject to frequent destruction by snow, which remained season after season unmelted, and where men could "plunge through the new-fallen snow, and slip and struggle on the firmer stratum beneath, while the beasts of burden not only floundered on the upper fresh coat, but broke through the surface of the lower snow, and remained there with their loads wedged

in as it were, both through their own weight and the firm nature of the old snow." We may safely challenge the supporters of the Mont Genèvre theory to find any corresponding spot in that pass, into which avalanches to such an extent could have fallen at that time of year, and where the occurrence is so frequent that they remain year after year unmelted, one bed on another.

On the contrary, in the whole Alps I have seen no place so strikingly and thoroughly corresponding with that same description, as the gorge of La Thuile, while the summit of the St. Bernard is often deep in snow long before the time mentioned. A recent writer, M. Jaques Replat, has indeed endeavoured, partly from this circumstance in Hannibal's passage, to show that he crossed by the Col de la Seigne, and the Allée Blanche and its glaciers, but this theory hardly needed the orthodox refutation of M. Schaub. In the absence of any discrepancy of moment, or which will not allow of reasonable explanation, between the general features of this route and the distinct account of Polybius, the most superficial natural observer cannot for a moment, I think, hesitate to regard the avalanche-choked gorge of La Thuile, as the seal of the identity of the Little St. Bernard with the scene of Hannibal's passage.

It was with no small pleasure that I anticipated a personal examination of this famous pass, which had so long had an especial interest to me, and after an hour's halt for Tschitta at the little Hôtel des Voyageurs, where we were well and civilly treated, we started again.

Bourg St. Maurice, the ancient Bergintrum, is placed at the western end of the wide reach of the upper Tarentaise, and the ascent of the Little St. Bernard is distinctly seen at the extremity of it, above the village of Seez. The bottom of the valley is occupied, for a great portion of its extent, with the marshy alluvial beds of the Isère, which grow a great quantity of poplar-trees; but wherever practicable it is cul-

tivated, and for some distance up the mountain sides. The noonday heat was oppressively stifling as we took the road to Scez, especially after the glaciers of the Allée Blanche and the chilling shade of Chapiu. We should have been now too glad to change to them from the hot dusty road, where the only things that seemed enjoying themselves, were the myriads of large blue and crimson winged grasshoppers, and the Clouded-yellow butterflies which clustered on the thistles.

The change from the foot of Mont Blanc, too, was not more manifest in the temperature and climate, than in the physiognomy and costume of the people. The Savoyards of the Tarentaise have none of the Italian cast of countenance, dark complexion and hair, which characterise the Valdotians of Piedmont. The "habit rouge" no longer appears, and the women, in place of the becoming and classical kerchief of red or blue, knotted behind the head, as worn throughout the Val d'Aosta and its branches, have their hair plaited and twisted spirally round the head, up to a point, surmounted by a black skull-cap decorated with black lace, which has a very odd effect. The patois of the two sides is also widely different.

We turned off to the mountains at a little auberge, "chez Fort," passing through Scez and Villars, when we came to the great cliff of white gypsum, the Rocher Blanche of the natives, and the famous "λευκοπετρον ὀχυρὸν" of Polybius and of controversy. The stream of the Reclus runs below it in a deep ravine, spanned by a modern bridge to the right bank, above which the present route is carried. The old Roman road, however, and the one by which Napoleon commenced his intended pass over the Little St. Bernard, was in all probability the line of Hannibal's march, and passes behind this rock—without crossing the stream—and by a ravine running down to Villars. Whether Polybius's term, "λευκοπετρον," is to be interpreted as a white rock or a bare rock, seems of comparatively little consequence, as it so

exactly tallies with his description of the position taken up by Hannibal for the protection of the rear of his army from the barbarians. They had inflicted so heavy a loss on his forces as they advanced along the sides of the mountain, by rolling down stones and rocks on them, that Hannibal was forced to halt here and hold them in check, while his baggage and cavalry went on in advance. Here he remained the whole night before they got clear of this difficult and precipitous ravine, as Polybius characteristically describes it. On the following day he led the whole of his army and elephants to the plain on the summit of the pass, where they halted.

It is remarkable that not far from this spot the bones of elephants have been found. The guide of Messrs. Cramer and Wickham assured them, that he had both seen and handled bones much larger than those of oxen, found in the bed of the stream; but the testimony of the Marquis de St. Simon, in 1769, is more to the point still, as he admits, as well known, the discovery of an entire skeleton of an elephant here, while at the same time he strenuously upholds the idea of Hannibal's passage by the Monte Viso.

We crossed the modern bridge over the Reclus, where I stopped for some time, leaving E. and Tschitta to go on with Otto, while I carefully examined the locality, and to my complete satisfaction. Returning from the ancient road, a steep zigzag track leads from the modern bridge to the scattered houses of the little hamlet of St. Germain, on the right bank; and the heat of the afternoon sun, pent up in this nook, was most intense. Otto was so done up with it, that, when at length I came up with them at the top of the steepest part of the ascent, I found him stretched on his face fast asleep under a group of large pines. E. had dismounted, and her pony being picketed had chosen a similar shady spot; and almost overpowered with the heat myself, I was not sorry to join her, and enjoy a short repose under the delicious shade.

refreshed by the gentle breeze that sighed through the pine-trees. Our position commanded a beautiful view down the rich valley, the zigzag road and bridge, and the distant Val de Tignes. The conspicuous section of white gypsum on the face of the cliff opposite, was so remarkable, that the most careless traveller could hardly fail to remark it. The tradition of the country as to Hannibal's passage here is so universal, that modern investigations, or the assertions of inquiring theorists, could hardly have produced such a general popular belief, unhesitating as it is, and resting upon ancient testimony long before the question was mooted elsewhere.

For my own part, I felt not the slightest doubt, and strange thoughts suggested themselves as one looked on that white rock, and pictured Hannibal and his Carthaginian host; the heavy baggage-waggons toiling painfully up, while rocks hurled from above crashed down upon them—the cavalry skirmishing with the flying bands of Celts, and the huge unwieldy elephants, from the jungles of the tropics, mounting to unknown scenes of snow and winter.

From the point of our halt the ascent was easy and gradual, along fine expanses of mountain pasturage on which the peasants were getting in their hay. The ravine of the Reclus lay on the right, and on the left the steep smooth slopes of the Mont de la Colonne, the summit of which is only occasionally seen above them. All along the path are but too evident proofs of the fearful destruction and loss of life, caused by avalanches which sweep down from these heights; and innumerable crosses of wood, about two feet high and more or less simple, often grouped two or three together, mark where their victims have met with a frightful death. These avalanches had been unusually destructive that spring, owing to the heavy winter snow, and in places the track was quite broken up and destroyed, while many of the crosses bore very recent dates.

The pass is bleak and dreary, and as destitute of trees as the Val de Bellaval, though it has none of the savage grandeur of the latter. Lofty poles mark the winter track as on the Great St. Bernard, and a miserable-looking "cantine," perched on an eminence to the left, serves as an outpost to the Hospice itself. On the right of the ascent, not far from this, I observed some remarkable springs, so strongly impregnated with iron, that they had saturated the swampy ground and herbage for a wide space, tinging them a bright red with a thick crust of oxide.

The first sign of the summit is an alcove surmounted by a cross standing out conspicuously on the top. Reaching it by a short cut, I enjoyed the beautiful view back into the Tarentaise, with the fine glacier of Mont Iseran streaming from the mountains which close it in, and in the farthest distance the range of the Grande Chartreuse between Chambéry and Grenoble. Behind, to the north, the Hospice appeared at the end of a broad terrace; a much reduced resemblance of that on the Great St. Bernard, standing on a long grassy plateau commanding magnificent views both ways. The priest who resides here to entertain strangers was bidding farewell to a fair dame from the valley who had lingered behind her party, and was helping her to mount as we came up. He was not in monastic habit, only wearing a well-worn curé's dress, being a secular. Neither his manner nor appearance was at all prepossessing, and very different to the polish and courtesy of the good fathers at the Convent of the Great St. Bernard, of which the Hospice here was formerly a branch, but is now under Government control. His attention seemed chiefly absorbed by E.'s side-saddle, and his admiration was great when he learnt we had brought it all the way from England.

Three fine St. Bernard dogs ran out to meet us, oddly named Bellona, Pluto, and Milord. The prevailing malady had however greatly reduced the breed, all the puppies of

that and the previous year having died, as we had heard at the Great St. Bernard. There are many little features of similarity between the two Hospices, and not the least is the black lakelet close by, fringed with patches of snow, and on which a woman was paddling about in a little tub-like canoe. After a short rest outside, we declined the not very cordial invitation of the priest, just as we were starting, to enter and take refreshment; and walked on to the well-known Colonne de Joux, and the Circle of Hannibal, a short mile from the Convent, standing on the grassy plateau.

The column of Jupiter is of "cipolino," and both these monuments of antiquity, there is little doubt, are relics of the ancient Celtic worship of Pen, which was cultivated on this mountain as well as on the Great St. Bernard. The circle of rude stones planted deep in the soil, some two hundred and fifty feet in diameter, is clearly analogous to the well-known monuments of the Celtic Druids in our own country, from Stonehenge in Wilts to Stennis in Orkney.* A portion of a column similar to the one here, has been already noticed on the Great St. Bernard, and in all probability the early temple which the Celts built at the summit of the latter, was also a circle of monoliths like this; but the much narrower space and the vastly greater traffic would have caused its early destruction, not to mention that it was the only convenient site for the new Roman temple.

There is a local tradition connected with the "Colonne de Joux," that on its top, once on a time, was a great carbuncle called the "eye of Jupiter," to which marvellous qualities were attributed. At the present day it simply marks the boundary between Savoy and Piedmont—the Tarentaise and the Val d' Aosta. The plain, which is about half a mile wide, and perhaps one and a half or two miles long, is

* Porter mentions a ring of stones on the summit of Mount Hermon, for a great part of the year in deep snow, and where Baal was worshipped. —PORTER'S *Damascus*, p. 293.

such a site as can be found on no other of the disputed passes, for the halting place of such an army as Hannibal's, and at the same time so agreeing with the description of it by Polybius. Here he pitched his camp and remained two days while his stragglers came up. If there is any difficulty about the statement of his having shown Italy and the direction of Rome to his troops, it must apply to any of the other rival passes equally with this.

On the Mont Valesan, on the right of the Col, are some supposed ancient fortifications, and a view which must be very fine. Another height on the same side, called the Belvedere, commands a fine prospect of the glaciers of the Ruitor and the adjacent ranges; but as we intended ascending the Cramont next day, from which is a much finer view of them, and were anxious to secure the fine weather while it lasted, we did not stay at the Hospice.

On the Aostan side the Mont Blanc chain comes into sight, greatly intercepted however by the intervening ranges of rugged limestone and schist, of which the Cramont is one of the dominant points. This range is crossed again by the lower ridge extending from the Aiguille du Glacier to the Ruitor, and crossed by the two passes of the Col de la Seigne and the Petit St. Bernard, forming the natural barrier between Savoy and Piedmont. From the plain the little lake of Verney, deeply embedded at the foot of the Aiguille de Belle Face, was a singularly gloomy object, its still dark waters reflecting the sombre-coloured mountains and snow-beds, behind which the sky was glowing with the rich hues of sunset. A long line of poles to direct the winter traveller, makes an extraordinary diversion here to the left, in order to avoid the avalanches. Near a little cantine the path crosses the "Eaux Rouges," another spring of strongly impregnated iron-water, like those before mentioned, but much more extensive, covering a wide space of ground, which is incrusted with a thick deposit of red

oxide, and a considerable stream which runs from it tasted strongly of iron.

The mountain formation along the pass of the Little St. Bernard, from Scez to St. Didier, is of a varying schist, more or less micaceous, quartzose, or calcareous, becoming in places a kind of rough marble or "cipolino." Beds of gypsum occur throughout, lying between or upon the schistose strata, especially on the right side of the pass from Scez, and are a very remarkable feature of the geology of these ranges. Sometimes they are of great thickness, even forming lofty masses of almost pure white gypsum, as at the Rocher Blanche, and may be traced continuously from thence to La Thuile; and I afterwards observed the same beds cropping out to a great extent at the base of the Cramont at Courmayeur, between that and Mont Chétif; and again in the heart of Mont Carmet as seen from the summit of the Montagne de la Saxe. It was interesting to me, accustomed to associate gypsum with the fossiliferous sedimentary beds of the Eocene and other periods, to find it here imbedded amongst the mica schists and gneiss of the metamorphic rocks, its almost indestructible nature having resisted the igneous influences which acted so powerfully on them.*

The scenery on the Aostan side was dreary and uninteresting, and I suffered so much from my sprained knee in the descent that I was glad to get down to La Thuile, only stopping to look down into the deep dark chasm in the calcareous rocks, which is crossed by the Pont Serrant, 150 feet below which gushes the torrent of La Thuile.

Before entering the village of La Thuile we turned aside down a lane to a newly established auberge, the "Croix Blanche," recommended by Otto. It was only half furnished, and dreary enough, but bore the marks of better

* Gypsum also occurs in the same formations, on the range between the Val Fonta and the Val de Cogne; and at Bellinzona and Airolo.

days, family portraits still hanging on the walls, and a once gilt console-table and frescoed ceiling, with cupboards, presses, and old oak lumber, all about the rambling passages. As we were told, it had been the old family mansion of the once wealthy Jacquemots, but the servants left in charge by the owner, who had gone to Aosta to buy furniture, could tell no more. After a very long delay, during which a marmot was brought for sale, we got some supper, which was a series of little "plats" burnt or watered, and perfectly useless as food; but at length came the omelette originally requested, our never-failing resource in all out-of-the-way quarters where eggs were procurable, and as usual it was a good one. Next morning each "plat" was charged separately as culinary masterpieces, and for a bottle of bad "vin ordinaire" 8 francs. I wrote out my own bill, reducing it one half, which was at once taken, with some good advice on behalf of future travellers and for their own interest.

We rose at four, a glorious morning promising a clear day for our intended ascent of the Cramont, and we started as the rising sun gilded the snow-peaks above the calm cold grey glaciers of the Ruitor, of which we now had a most exciting view. To explore these magnificent glaciers La Thuile would make good head-quarters, and I much regretted leaving them unvisited. The Baltea torrent springs from this vast ice region, and joining the Doire at St. Didier they flow together through the Val d'Aosta under the joint name of the Dora Baltea, or Doire Baltique, thus distinguished from the Dora Riparia running from Mont Genèvre to Turin, both rivers ultimately debouching into the Po. It is worthy of remark that in the name Doire we have probably one of the few remains of the old Celtic language now traceable in this country. The word is the same as "dour," and our own Gaelic dûr, meaning water, and is to be found in the names of numerous

rivers, as the Adour, Dordogne, Durance, the Douro, and the English Derwent applied to several streams, the Adur in Sussex: and others which might be adduced in Scotland and other countries originally peopled by tribes of cognate Celtic origin.

Even at that early hour the bells were jingling in the village church of La Thuile as we passed through it, and peasants dressed in holiday costume were coming from all quarters to the festival of the Assumption or Mi-Août, the grand fête-day of the mountaineers. Leaving La Thuile by a bridge which crossed the river, we entered the narrow gorge in which Hannibal met with one of the greatest natural obstacles he encountered in his wonderful march. The present road, a good carriage-way, is carried high up the face of the cliff on the right side of the gorge. The old one lay on the opposite side, but is so subject to the ravages of avalanches that for years it has been abandoned on this account and the modern one excavated on the opposite rocks. The snow which here impeded Hannibal's march, and had destroyed the road at that time, does not however always remain so late in this gorge, except in occasional seasons. De Saussure mentions it in 1792; Cramer says that it also remained unmelted in 1816 and 1823, and I esteemed myself fortunate on arriving at the spot to find the ravine completely choked up and bridged across by immense masses of avalanches quite covering all traces of the old road, and in such quantity that it could not possibly diminish much before the next winter. These avalanches slide down from the tabular limestone peaks of Mont Favre, which form smooth slopes down to the S.W., at so steep an angle that one could hardly understand how the snow rests on it at all; and down this incline, which appears to lie at an angle of 40 or 50°, it is shot over in avalanches into the deep gorge of La Thuile.

Were a fresh fall of snow to happen later on that year, as the end of October, when it is far from unusual, the iden-

tity of this scene with the description of Hannibal's march would be complete. I must say this phenomenon afforded me the greatest gratification, and removed the slightest lingering trace of hesitation I might have felt.

As we descended the valley we met numbers of people going up to High Mass at La Thuile and the Hospice, and among them several peasants in remarkable costumes, especially one in an old-fashioned coat and gaiters of scarlet, with broad green garters outside his scarlet shorts. Not a person was to be seen at work anywhere, though the harvest was now in progress. From the road, which is carried at a giddy height along the river, we had beautiful glimpses, between the fine old pine-trees which fringed its edges, down into the deep ravine where the torrent has worked its bed.

At the prettily situated village of La Balme, towards which the road rapidly descends, we crossed the river to the other bank, and began the ascent of the foot of the Cramont among enclosures and little hamlets—the latter mere clusters of châlets so low and close together that E.'s knees on her pony were in frequent peril against the corners of the roofs. We found the usual track had been destroyed by an irruption of water, and so were obliged to return and make a détour. Winding up the hill-side, we passed through terraces of ripe corn, which seemed doubly bright and glowing in the sun from the contrast with the opposite mountain-side, which rose almost perpendicularly from the valley of La Thuile below; the dense pine-trees which thickly clothed it hardly distinguishable in the dark purplish shade. Numbers of the large swift (*Cypselus alpinus*) were sporting in the air between us and this mountain, and the effect of the sunbeams glancing like a silvery radiance from their plumage, in contrast with the deep gloom behind, was very singular.

On the top of a plateau or shelf half-way up these mountains lies the famous camp of Prince Thomas of Carignano, which was occupied by him during his war with Christina,

widow of Victor Amadeus I. On the death of the latter she assumed the regency in the name of the youthful sons of the late King—Francis, who died first, and Charles Emmanuel I. Her brother-in-law Prince Thomas, and Cardinal Maurice, determined to wrest this power from her, and on the pretence that she was betraying Piedmont for the advantage of France, she being a daughter of Henri IV., they invaded Piedmont, by the Little St. Bernard, at the head of a Spanish force. Prince Thomas laid siege to Turin after reducing Aosta and other cities. The citadel was garrisoned by French, which Prince Thomas beleaguered with his Spaniards. He again was besieged by the French outside, under Harcourt, and these again by the Spanish reinforcements under Leganes. This most unparalleled quadruple siege lasted four months and a half, when Prince Thomas was obliged to capitulate.*

At the last châlets no one was to be found, but we stowed away our bags and spare wraps until our return; and soon afterwards reaching a straggling pine-forest, the valley of Aosta once more opened out below us, and we emerged on to a steep hill-side of wide extent; bounded on the west by the tabular peaks of Mont Favre, and on the right by the line of forest, which gradually passed from pine to larch, the latter only growing at the highest altitudes. This steep slope concentrated the full rays of the sun, and was intensely hot, and I killed one or two vipers of large size basking among the limestone rocks.

At the last few straggling larches—noble trunks of great size but sadly shattered, looking like the remains of the forlorn hope of the forest in its attempts to scale these wild heights—on turning an angle of the mountain, through their scathed and ragged tops burst an indescribably magnificent view of the dazzling snow-range from Mont Blanc to the Grande Jorasse, Courmayeur at a vast depth below our feet,

* Gallenga, vol. iii. p. 93.

with the Val d'Aosta and the dark pyramid of Mont Carmet. This sublime view alone is worth the ride up, to any one not strong enough or of sufficient nerve to climb the remainder of the ascent on foot. We picketed Tschitta in a romantic hollow among the rocks and noble old larches, on a bright greensward carpeted with gentians; and after a short halt began the last ascent up an excessively steep and slippery incline, the short parched grass affording insecure footing. As we ascended, the slope was so abrupt that, on looking down, only a very short distance can in many places be seen below the feet; the sheer edge seeming to shoot over into the deep distant valley of La Thuile, 3000 or 4000 feet below, in an apparently perilous manner in case of a slip. The herbage was scorched and slippery in the extreme, not a flower surviving except the two everlastings, the delicate pink *Gnaphalium dioicum*, and the lovely velvety white stars of the *Leontopodium alpinum*—a native of the highest Alps, and abundant here below one especially steep and narrow ridge sloping abruptly both ways, and called the "mauvais pas."

The rayless sun was burning hot in the almost purple sky; there was not a breath of wind, though at such an elevation; and E. found the ascent very trying, with the inconvenience of a lady's dress, especially at the "mauvais pas;" but she determined not to give in, and at length, after one hour and forty minutes' toil, was rewarded by standing on the summit, which we reached at 10 A.M. Long as we had looked forward to this moment, the realization of our hopes far surpassed every preconceived idea, and the eye, bewildered at first by the grandeur and sublimity of the vast panorama, and half blinded by the sudden burst of dazzling snow-fields and peaks, hardly knew where to rest.

We had not however looked long when we both exclaimed "Monte Rosa!" and far away to the eastward, nearly fifty miles distant, grouped with the mighty Mont Cervin, we once more beheld its well-remembered outline, presenting to

us its unillumined flank, like a mass of pale alabaster peaked with gold.

At the very summit of the Cramont the strata, which as was said slope steeply to the south, terminate on the northern side in a precipitous edge which projects abruptly, and at one point like a plank thrust over a vast abyss. Standing on the giddy edge, we looked down past our feet into its profound depth, with scarce a rock to intercept the view, on to the diminutive-looking roofs of Courmayeur nearly 5000 feet below us. On this slab of rock, at a point close to the edge, where it was not more than a few yards square and inclined at a rather uncomfortable angle for sitting, we took up our position.

Immediately facing us was the summit of Mont Blanc, appearing so near that one fancied at first a rifle-ball would almost have reached it, while with the telescope I could see the rippled wreaths and spicula of fresh snow sparkling on its spotless surface as distinctly as if actually treading on them. Spreading out our plaids, after placing some large stones conveniently so as to avoid the strain required to prevent slipping, setting the compass, and getting out our maps, we prepared to spend some hours in surveying the grand scene. First, however, with appetites sharpened by the long walk from La Thuile and the pure air, we ate our hard-boiled eggs and bread, with red wine mixed with snow; which Otto procured from under the edge of the precipice, over which, to our amusement, he suddenly dropped, and reappeared with balls of the snow, which he had found on a ledge just below. The summit of the Cramont reminded me strongly of that of Mont Pilatus, both being equally abrupt and precipitous to the north, and sloping steeply to the south, only Pilatus is still more narrow and limited.

Not a single speck of cloud was to be seen on the mountains or over the deep blue vault (almost black) in which the sun shone with a peculiar mysterious light, round and de-

fined as the moon. Scarcely a breath of wind fanned us, and the only interruptions to the solemn silence were our own voices or the occasional rumble of an avalanche. Before sweeping the more distant points of the widely-extended horizon, our attention was arrested by the savage mass of the peaks of Mont Favre, the continuation of the Cramont range, stretching to the S.W. and W., and piled one above another in projecting pyramids and angular tables completely bare and bleak, upreared at parallel inclinations of more than 45°, as if in defiance of the opposite granite pinnacles of Mont Blanc. Most vivid was the evidence of the stupendous power which the protruding masses of tertiary granite, upheaved during the last great pre-Adamite disruptions of the earth's crust, must have exerted in breaking up these beds of ancient deposits; which in their present enormous fractured surfaces and jagged edges, so little changed by the long lapse of time, tell of the awful crash that must have accompanied it. The rending asunder and upheaval of the solid strata, once far beneath the sea, but now 9000 feet above it; the thrusting through them of the vast granite peaks of Mont Blanc and the other central Alps to heights reaching to more than 15,000 feet above the level of the sea; the terrific surging back of the waters before covering them, sweeping away the then existing animal and vegetable creations, changing continents into seas and seas into continents,—all these seem, in the present tranquil state of our globe, events too vast to realize; and yet, in the long successive periods of the ancient history of the earth, such convulsions were oft-repeated occurrences, preparatory to its becoming the perfected and divinely-planned habitation of man—the last and highest work of creation.

These jagged limestone rocks shut out the Col de la Seigne; and an intervening and lower parallel ridge of the same formation as the Cramont, called the Mont de l'Art, intercepts the view into the Allée Blanche. Between this and

the Cramont lies a singularly bare and desolate valley. The Aiguille du Glacier, above the Glacier de l'Allée Blanche, is the first point which comes into sight from behind Mont Favre, and from which commences the splendid chain of Mont Blanc, seen in its full extent of eighteen or twenty miles from thence to the distant Aiguilles above the Glacier of Triolet. This colossal mass of granite peaks is seamed with the enormous icebeds of more than a dozen magnificent glaciers ceaselessly straining, cracking, and urging down the seeming perpendicular face of bare granite to which, from this point, they appear to cling in some mysterious manner, abruptly broken off at a vast height above the valley.

Beginning at the Aiguille du Glacier, the two beautiful glaciers of the Allée Blanche and Tschelletta descend from it—divided only in their origin by a narrow arête—unrivalled in dazzling purity and splendour. A beautiful snow-peak, like the Silberhorn on the Jungfrau, stands conspicuously on the crest above, which is cut by the advanced peaks of Mont Suc. The laminæ of which this chain of Alps is composed, seen in perspective from here, appear to overlap each other, running S.W. to N.E., and disposed, as it were, in échelon along the line of the great chain. Thus, this ridge of the Mont Suc, cutting the ridge behind, runs backward itself behind Mont Blanc, surmounted by the Aiguilles of Trelatête and Bionnassay. From the tremendous chasm between it and Mont Broglia issues the great Glacier du Miage, hidden however by the Mont de l'Art. In the centre of the long line of summits reposed the glorious mass of Mont Blanc (15,744 feet) in silent majesty, enthroned upon the wild jagged granites of Mont Broglia, the Roches Rouges, and Mont Péteret, which bristle with sharp pinnacles which tower into the air like needles. The snow barely clung, except in crevices and hollows, to the tremendous face of these masses of granite, what does adhere during the depth

of winter being quickly thawed by the reverberating rays of the sun; and the inaccessible vertical pinnacles of the Péteret were bare from summit to base, all but a little ridge on the very top, and a "corrie"-like hollow in the centre. Down from Mont Blanc, however, a vast field of blue crevassed glacier descends between the Broglia and Péteret, divided in the middle by the lofty Aiguilles Rouges into the two glaciers of Frênez and Broglia, as seen from the Allée Blanche. The giant wreaths of snow hanging over from the crown of Mont Blanc, as seen through the telescope, were very beautiful; their long wavy ridge, fringed with enormous icicles, defined with dazzling brilliance against the dark purple sky. Against the Monts Maudits an immense cliff of snow rests, appearing to be many hundred feet in height; and between this and the dome of Mont Blanc is a lower ridge, which is the point at the end of the "Corridor" between the Monts Maudits and the Mur de la Côte, where on the ascent of Mont Blanc from the Chamouni side the first view is obtained to the southward down into the valley of Courmayeur.

At this point, according to the account of Messrs. Hudson and Kennedy,* who made the ascent from St. Gervais—the first time it had been accomplished and only the week before—"overhangs the enormous and very precipitous Glacier de Brenva, which rolls vast masses of snow and ice almost from the summit of Mont Blanc to the valley below. The excessive steepness of this glacier renders its onward motion so impetuous that on its arrival in the Allée Blanche, some ten thousand feet below, the ice is forced up against the rocks on the other side of the valley." From the Cramont this glacier looked like a frozen cataract, the upper part a comparatively smooth and unbroken sheet of steep snow, ice, or névé, gradually broken up as it descends, until at last it is tossed into a wild confused mass of icebergs, crushed

* Kennedy and Hudson's Mont Blanc and Monte Rosa, p. 69.

together and riven in every direction by deep clefts of azure blue.

The next points of interest along the icy battlement after the Monts Maudits and the Mont Blanc du Tacul, were the pass of the Col du Géant (11,146 ft.) and the immense Dent du Géant (13,099 ft.), rearing itself almost perpendicularly like a colossal tower keeping sentinel over the vast range. With my telescope I traced the route quite distinctly from the tracks on the grassy slope of Mont Frety, up by the rocks and the steep "arête" above the Glacier of Entrèves. Viewed in face the ascent seemed nearly precipitous.

To the right of the Aiguille du Géant the range stretches away to the N.N.E., crowned by the grand peaks of Mont Mallet (13,068 ft.), the brilliant white dome of the Grande Jorasse (13,496 ft.), the Petite Jorasse (12,246 ft.), the Aiguille Leclaud (10,914 ft.), and the Aiguilles trending more to the north above the Glacier of Triolet. This glacier and that of Mont Dolent close up the head of the long dreary Val Ferret, which descends to La Saxe.

A very remarkable feature of the glacier formation of the high Alps, the "Bergschrund," or crevasse between the upper snow of the summits and the lower névé, or "firn," as it is called, into which it is first consolidated, is beautifully seen from the Cramont; the chasm being clearly traceable along the whole chain in an uneven dark line, continuous, except when broken by bare rock, and conformable in its rise and fall to the elevations and depressions of the crest.

Right beneath our feet, at the depth of nearly 5000 feet, we looked down into Courmayeur, now dwindled to the apparent dimensions of a little nest of toy houses, and apparently so immediately below us that we might have thrown a stone into it. The Mont Chétif better deserved its name from here, seeming a mere mound, while the Doire was narrowed to a tiny thread. To the N.E. in the far distance, behind the ridge from the Col Ferret to the Mont Carmet—whose dark

gloomy-looking and deeply-furrowed sides contrast so strongly with the opposite granite range—rose the snowy heads of the glacier-ribbed Mont Velan (10,470 ft.), and Mont Combin (13,300 ft.), with the heights above the Great St. Bernard. To the right of Mont Carmet we clearly traced every stage of our route down the Col de Serena, in all its tedious length from the snow crest to the Val d'Aosta, where Morgex looked like a pigmy village on the thin white line skirting the Doire and marking the road to Aosta.

Above the Col de Serena, Monte Rosa and Mont Cervin, though at such a distance, were, after all, the most brilliant objects in the whole panorama, and we again and again turned to their superb masses, which now gleamed in the noonday sun. Far away to the E. by S. stretched the beautiful Val d'Aosta, its richly wooded slopes and terraced vineyards lost at last round the edge of the long mountain ridge, running down from the Col de Serena to near Avise; and Mont Emilius and the Becca de Nona showed where Aosta lay beneath. To the right of these spread the wild ranges of the savage glacier regions of Cogne and Val Savaranches, one remarkable peak of which arrested our especial attention, forming a narrow edge to the north, running up to a point, sharp and straight as a knife, and covered with steep snow. Otto called it the "Corne de Cogne:"—we afterwards became better acquainted with it as the famed Pic de la Grivola of the chamois hunters of Cogne, and one of the last haunts of the bouquetin.

To the southward, and above the precipices of La Thuile, towered the Grand Sante (9200 ft.), the Ruitor (10,200 ft.), Mont Albano, and parts of the Little St. Bernard mountains; and beyond, the heights of Tignes and Mont Iseran above the Tarentaise—where a few fleecy clouds were now resting—cut by the black jagged rocks of Mont Favre, with which we began the survey, and which fortunately only obstructed the least important part of the view to the west. In the centre of

the savage scene on the south side—wild ridges, stern valleys, and successive ranges of snow-peaks—lay the superb glacier of Ruitor, the finest in the whole panorama, appearing to consist of three principal fields of enormous extent and spotless purity.

The Baltea torrent, as before mentioned, runs from them into the valley of La Thuile, which yawned below our feet like an awful chasm, dark and hazy, into which it seemed as if a few yards' roll, down the sloping strata on which we were sitting, would precipitate us thousands of feet into its impenetrable depth, such is the illusion produced by the formation of the mountain. While we were eating our hard-boiled eggs, two of them, which were propped up with little stones to keep them from rolling, got loose and started off; to follow them was to risk our own necks: Otto adroitly stopped and recovered one with his baton, but the other bobbed down at a rapidly increasing pace, amidst our hearty laughter, until, disappearing with a gentle jump over the edge, it met somewhere far out of sight with the traditional fate of Humpty Dumpty.

Hours sped like minutes, so little did ourselves, our doings, and the passing moments of our brief life, seem in comparison with that vast and wonderful scene of successive telluric revolutions, counting by ages of unknown duration. Those granite pinnacles, for instance, which were the last to appear of all the rocks around us, were, when first upheaved, of an intense heat, which must have been an incalculable series of years in cooling, until it became—and that long anterior to the creation of our present organic world—an icy chain of apparently eternal snow, with a long marked chronology of its own, written in its glacial and alluvial deposits; yet silent and changeless as it seems, who can tell how far distant may be the time when once more "the elements shall melt with fervent heat," and the world undergo another mighty change?

By the time I had sketched and roughly coloured in an

outline of the surrounding peaks and glaciers, the sun had declined far to the west. Otto, who had amused himself first with dropping the largest rocks he could find over the edge of the precipice, peering over to see if he could detect any startled chamois, and then with hunting marmots, which were abundant—was, I found, lying flat on his face fast asleep, with arms and legs outstretched as if clinging to the rock. Late in the day we reluctantly left the summit, its wonderful view indelibly impressed upon our memories, and fully entering into De Saussure's account of his own impressions, that "the six hours he spent on this mountain were of all his life those in which he tasted the highest pleasures which the contemplation and study of nature could afford."

The slippery face required more care on E.'s part in descending than it had in the ascent, and the steep ridges seemed also much more precipitous. I made Otto grasp one end of an alpenstock in his left hand, and I took the other, E. holding on in the middle by her right hand (by far the easiest and safest plan for a lady in steep descents). We half slid half ran down at a rapid pace, reaching our picket at the old larches easily in thirty minutes from the summit, which it had taken us an hour and forty minutes to climb up to.

We were not less struck now than we had been on the ascent with the beauty of the scene at this point: the grouping of the veteran larches on the bold rocks with the background of snow-peaks is perfect. When Tschitta was caught and saddled, E. sent it down to the châlets, the descent on the wide amphitheatre-like declivity being awkwardly steep and rough, and by the time we reached them again our spare things were packed. Taking the path to the left, we descended rapidly through a romantic forest—with fine glimpses of the huge cliffs above—chiefly of spruce, having left the larch on the higher range. Otto had represented the track as so bad and dangerous that it was absolutely

necessary for E. to dismount here, but we suspected a little exaggeration and found nothing very perilous.

We quickly regained the road we had left in the morning, here carried round the edge of fine precipices, with the Baltea boiling far beneath; and descending by an easy zigzag, from which we had once more a splendid view of Mont Blanc in the setting sun, we soon reached St. Didier, embosomed among trees and rich meadows at the bottom of a deep gorge under the precipices of the Cramont. Without stopping here we passed through Palévieux, and in three quarters of an hour reached Courmayeur, where we were welcomed back by Bertolini.

The valley of Courmayeur was hot and close after the free mountain air, and we strolled out till late in the evening to enjoy the gentle breezes wafted down from the Géant. Looking up in the deepening twilight at the dark summit towering far above, on which we had spent the day, it was with especial satisfaction that we thought of the wondrous scenes we had enjoyed from it in such perfection.

CHAPTER IV.

VAL D'ENTRÈVES.

Courmayeur — Arrangement of plants — Bouquetin — Mineral springs — Visitors — Game — Trout — Fruit and vegetables — Gressins — Ascents of Mont Blanc — Montagne de la Saxe — Ascent of, and view — Cheese châlets — Attractions of Courmayeur.

THE remainder of our time at Courmayeur was fully occupied in exploring its immediate neighbourhood, and assorting and packing dried plants, and other accumulated specimens; a work of some time, as it was necessary to put them into the smallest and most convenient compass for transport. The plan we adopted for plants, with great success, was, placing them in folio sheets of drying paper, between two extra stout milled boards of the same size: these, when bandaged tightly together, were slipped into the water-proof oilcloth saddle-case, with the wraps on the top of it, so that when travelling it rested flatly on the mule's back, behind the saddle, secured by rings and cord; and the heat of the animal materially helped to dry the plants. When we halted for the night our fresh collections of the day were arranged, the paper dried by the portable flat iron, and the whole piled with large stones. In this way every one of some hundreds of specimens reached home in good condition.

Bertolini brought me some chamois and marmot skins, and among them I was extremely glad to got hold of a skin of the bouquetin or ibex, the steinbock of Switzerland, though unfortunately without the horns. He had been asked 60 fr. for the carcase of the animal by the chasseur who brought it, and 50 fr. more for the horns, which latter he had refused, and they must have been but small, as it was only a young

buck. It had been killed in the Cogne mountains, which we had seen the day before from the Cramont. They asserted at Courmayeur that they were still found on the Alps of the great chain in the neighbourhood of the Grande Jorasse, where there is a valley at a great elevation, called the Combe de l'Evêque, but I more than doubt it. Long since extirpated in Switzerland and the Tyrol, where they were once abundant, they are only found now on the Cogne ranges, appearing but rarely for a short time in the Monte Rosa district; the Dent des Bouquetins taking its name from the numbers which once frequented it, though none have been seen there for years.

An afternoon was devoted to visiting the mineral springs, and we strolled down the pleasant meadows, which slope towards the bed of the Doire, irrigated by numerous water-courses, which on the warm hill-side ensure abundant crops of grass: then covered with purple crocuses, while fine pumpkins grew luxuriantly in scattered patches. The rare and beautiful Camberwell beauty of English lepidopterists, the *Vanessa antiopa*, was abundant here. The high banks of the Doire are partially wooded, the glades affording, to the frequenters of the spring, picturesque and shady nooks for retreat from the hot sun. Down at the bottom of the dingle where the Doire runs—and on the edge of the torrent of glacier water, which flows swiftly past, roaring over the rough bed of boulders—a little bath-house covers the mineral spring of La Marguerite; the presence of which is indicated by the masses of calcareous and ferruginous deposits accumulated near it, in which leaves and sticks are thickly encrusted. This red deposit is so bright, that it is used as a pigment. Not far from it, along the river-bank, are other minor springs of similar character, but less strongly impregnated. The mineral water wells out from under the lofty beds of alluvial deposit which overhang the Doire. It tastes strongly of iron, besides which it contains sulphate of magnesia (Epsom

salts), chloride of sodium (or common salt), and a little free carbonic gas, with lime. From the river-bed is a beautiful view of the Col du Géant, closing up the end of the narrow wooded dingle.

Continuing up the river, and skirting the banks above it for some little distance, a fine stone bridge spans the Doire, where is an immense rock of granite, so large that a water-mill is built into it. On the other side is the spring of La Victoire, with a primitive little pump-room of pine-wood, and a covered promenade outside for the water-drinkers. The waters are sparkling and purgative, containing sulphate of magnesia also, with less iron, but more carbonic gas, than the springs of La Marguerite. They were drunk daily by the Turinese visitors at the table-d'hôte, a bottle being set by each person, and, mixed with red Aostan wine, made a very pleasant summer beverage, the mineral waters counteracting the astringent qualities of the wine.

The hot sulphureous springs of La Saxe have been already mentioned. The hot springs of St. Didier, though not sulphureous, are, with the good baths and hotels established there, a considerable rival to the attractions of Courmayeur for the Italian visitors. Embosomed in shady trees and fragrant meadows, under the high overhanging precipices of the Cramont, with the snow-peaks of Mont Blanc closing in the view and diffusing a delicious coolness, the pure air must be an indescribable relief after the hot glare of Turin, and the endless dusty roads, mulberry pollards, and maize-fields of the plains; especially to invalids whose system requires bracing. To these attractions it must be indebted for its popularity, rather than to the very mild virtues of its waters, the principal of which is, that they constantly supply ready baths of hot water, which issues from a spring in the ravine of the Doire, at a temperature of 95°. It contains, I believe, no iron, and very slight traces of magnesia or other salts.

The little party at Bertolini's were pleasant, well-informed

people, who wisely preferred the quiet of the "Royal" to the crowded "Angelo," where, at the table-d'hôte, some sixty to eighty people sat down daily, in full dress, which seemed to occupy most of their time, as their costumes were changed half a dozen times a day. Along with this taste for dress, so strangely out of place here under Mont Blanc, the Turinese seemed to take an especial pleasure and pride in keeping up their barbarous broad Italian dialect, which one would have imagined the refinement of the capital would long since have banished for the pure Tuscan. Bertolini's great ambition was to get the custom of English travellers in preference to his own countrymen; and, notwithstanding much that unfortunately may too truly be said as to the grumbling, discontented, and exacting behaviour of many of the former, we found here as elsewhere that they were far surpassed in these qualities by the Piedmontese, and their company greatly preferred, not for the supposed long purse only. Bertolini's efforts to please and to provide liberally for his visitors deserved every praise. He treated us more like guests, and, what always contributes to the welldoing of an hotel more than anything else, he attended to everything himself. The difficulty of providing not only luxuries, but even necessaries, at Courmayeur, is greater than would be at first imagined, and the hotels are dependent on Turin for the greatest part of their supplies. The table-d'hôte on our return seemed absolute luxury after our late fare, and E. made a note of our first dinner. The usual soup was followed by slices of sausage, then a noble dish of potatoes came in to be eaten with butter, next followed boiled fowls and a purée of tomatoes; then in successive relays, chamois *au vin de Madère*, pickled trout with lettuces, stewed "cousses" or small pumpkins, roast hare and salad, haricots in their pods boiled entire, roast mutton with "poivrons" or large capsicums, stewed pears, grapes, peaches, and confectionery, and good Aostan wine, with sparkling water from La Victoire,—the charge only four francs a head.

Chamois are not scarce here, and when served at table may be relied on as the genuine animal, instead of the goat's flesh palmed off on unsuspecting travellers at every hotel in Switzerland, though it does not require much experience to tell the difference. We saw the one of which we partook, as it was brought in by a chasseur from the Allée Blanche. It was a fine buck, but the price asked, 50 francs, was enormous, though he took something less. The bouquetin has already been mentioned, but its flesh is very rarely to be had anywhere, the penalties against its destruction being so heavy. Hares are abundant, especially the Alpine species, which is white in winter. The brown hare is however much the better eating, the other being lean and dry, like the Alpine hare of our own Highlands. Ptarmigan are found on the high mountains, and black game are plentiful in the season, which is however late, not commencing until October; the young birds being hatched so far on in the season. I was assured that in the forests they get up thirty or forty at a time, and was strongly urged to return for the "chasse." Bears and wolves are not yet extinct, but keep lower down the valley, among the dark forests of the Val d'Aosta.

The trout with which our table was constantly supplied came all the way from the Lac de Tignes, a small mountain loch, high up in the Isèran district. Twice a week a man brought them in a creel on his back, by a short cut across the mountains, to the Little St. Bernard, and thence to Courmayeur. His load varied from four kilogrammes* to eight, and even occasionally ten. For carrying them he got 50 sous and his food, whatever the weight of his load. The competition between the two hotels had raised the price, which was then 50 sous to 3 francs per lb., so that they are an expensive luxury, yielding little or no profit. But I was told here, as elsewhere in the Alps, that "les Anglais" invariably asked for trout the first thing, associating them, I suppose, as a

* A kilogramme is 2 lbs. 3 oz. 4¾ drs. avoirdupois.

matter of course, with mountain streams, utterly regardless of glaciers and ice-water; so that an idea apparently prevails that an Englishman cannot possibly get on without trout.

The trout of the Lac de Tignes are small, and what Scotch fishermen call "herring size," and of a light silvery colour, with minute red spots very thickly set. I prepared the skin of one side of an average sized one, stretching and drying it in the sun with a little varnish, so as to preserve its characters. They are quite different in appearance from the river trout of Piedmont. Very few of the latter are found in the Doire, until some distance further down, where the chilling torrents of melted ice and snow become warmed and purified, so as to supply water-larvæ and insects for their food.

Courmayeur produces some good vegetables, and the haricot, a good index of climate in these valleys, ripens well. The peas are peculiar, having a very large curly pod, in which they are boiled whole. Pumpkins and gourds also come to some size, and when as large as an egg are used in great quantities, under the name of "cousses," fried in slices, stewed in gravy, mashed, and in a variety of ways, and are excellent. Fruit is chiefly brought from Turin, such as grapes and melons. Large green capsicums, or "poivrons," are a favourite accompaniment with meat, and, dried a little first and then pickled slightly, make a handsome dish. Tomatoes were plentiful, but obtained from Genoa and Turin. We had very fine peaches from Ivrea; in external appearance and rich orange colour exactly like a very large apricot, or "abricot pêche" of the French, and only recognisable as a peach by the stone.

Every one who has travelled in North Piedmont is familiar with the "gressins," or long pipes of crisp biscuit-like bread, resembling thick brown maccaroni, which are brought to table at every hotel in large sheaves, and are the most pleasant and amusing way of eating bread possible. We were curious to know how they were made, and, through

Bertolini, were soon initiated into the mystery by the chief baker of Courmayeur. We saw the process from first to last, and they very civilly wrote out for us a very intelligible receipt, which I subjoin exactly as it was given us.*

The paste was fermented in wooden bowls, in lumps kept constantly moistened; then spread out as required for use, into a thick oblong sheet, which was cut into pieces rather thicker than, and as long as, a finger, and laid side by side on a moistened board. Each piece in turn was taken up at either end with the fingers and thumbs, and steadily and quickly drawn out to the right length, about two feet. A long thin wooden shovel is sprinkled with coarse meal, and the gressins laid on, put into the oven, and adroitly slipped off the board and left a short time to bake, when they are as dexterously withdrawn, fit for use after cooling so as to become perfectly crisp. We stayed some time watching the process, as we had so often heard wonder expressed as to how they were made: it is, however, very simple, and we made some very presentable ones after a few attempts, which caused great amusement to the people of the "boulangerie," who were most goodnatured and obliging, entering into the fun heartily, and proud to show everything.

The recent ascent of Mont Blanc by Mr. Ramsay from this side by the Col du Géant, hitherto deemed both by Saussure and Forbes as impracticable; and the subsequent attempts of six Englishmen to accomplish the same—in which they were only foiled by bad weather, when the principal difficulty of the Tacul was surmounted—were great topics of

* Manière de faire les gressins.—1. Dans 10 killo. de farine il faut mettre un demi killo. de levain. 2. Farine de froment, première qualité. 3. La pâte un peu dure. 4. Les laisser lever 4 heures dans une chambre fermée. 5. Il faut, avant de les mettre lever, les couper en petits morceaux comme un doigt, et les disposer deux à deux sur une planche mouillée. 6. Lorsqu'ils sont levecés on les prend par les deux bouts, et on les tire de la longueur de 3 *ampares* (main ouverte). Dans dix killo. il faut mettre une poignée de sel. Il faut les mouiller de temps en temps avant de les mettre au four avec de l'eau chaude.

discussion among the guides. The professional jealousy of this class was amusingly shown. Though Mr. Ramsay had overcome all the real difficulties of the ascent, and discovered the route by the Monts Maudits, being within an hour of the summit, and actually met with by a party who had ascended from Chamouni, the guides of the latter place spared no pains to throw discredit on the fact, and there was a long and fierce correspondence in the local papers. He had made insufficient preparations, and several of his guides failed him. Nor had they wraps enough, nor provisions, for bivouacking on the snowy heights; being out four days, from July 29th to August 1st.

The party who followed in his steps, Messrs. Hudson and Kennedy, and others, were asked such an exorbitant sum by the same guides, 600 francs for each of them, beside all provisions, that they refused their services, and took with them two chamois hunters and seven porters, though every obstruction was thrown in their way by the guides. They reached the Mont Blanc du Tacul, when they were driven back by stormy weather; and the guides of Courmayeur triumphantly attributed their failure to their having gone without them; taking it for granted that they themselves could at once have dispelled the snow-storm and mists. I had been anxious to climb the Col du Géant before leaving Courmayeur, a much easier affair than from the Swiss side, but my late sprain compelled me to give up all idea of an enterprise requiring full energy and activity of limb; and we contented ourselves with ascending the Montagne de la Saxe for another view, from a nearer though lower point of part of the noble scene we had enjoyed from the Cramont.

E. took a mule and we started again at sunrise.

Passing the baths of La Saxe, we saw a singular figure descending the opposite path above the Brenva glacier, a burly Carmelite friar, in an ample white woollen dress girdled at the waist, and broad-brimmed hat. He looked as if he were

the priest of the glacier, with which his dress so well assorted; and the little chapel of Notre Dame close by, his oratory.

Turning to the right up the Val Ferret, we crossed and skirted the wild bed, choked with shapeless mounds and granite-blocks, of the branch of the Doire which rises in the glacier of Triolet, and receives all the ice and snow water of this side of the immense range, from that point to the Col du Géant. On our right, resting on the foot of the mountains, we passed over the singular ancient moraine, from which Forbes concludes that the great glaciers opposite, which have now retreated far up the mountains, once stretched right across the valley, and filled it, as the glaciers of Brenva and Miage now do the Allée Blanche. The ascent, which commences shortly beyond this, is by an easy path up the mountain-side, which is barely sprinkled with larch and rhododendron, and a very scanty vegetation. At the highest limit of the larch some beautiful old specimens are scattered in park-like glades or troughs, and there is a beautiful view over the precipice which overhangs the valley down to Courmayeur, with nothing to intercept it but a few projecting larches. The glacier of Brenva, between the Mont Chétif and the opposite range, is seen, like an enormous road of ice, supported on its moraines as embankments on each side, at the foot of which the arched outlet of the Doire looks like the narrow entrance into a vault.

Our muleteer, a stupid peasant, wanted to picket the mule at a post which he said was the summit; but, seeing higher ground to the east, we went on till we reached the summit of the Croix de la Bernada, an outcrop of the same intruding granite which appears at La Saxe, and from which we had a complete and splendid view, only inferior to that from the Cramont.

Though such was necessarily the case as far as the distant panorama was concerned, from its much lower elevation, yet it was almost compensated for by the much nearer and glo-

rious spectacle of the great glaciers and fields of eternal snow of the eastern part of the range, from the Géant, fronting us in overwhelming proximity. Niched in the broad rifts of the stern precipices, whence the ice-streams and *débris* are shot in innumerable furrows down the polished rock, these gigantic sheets of ribbed and crevassed ice, of dazzling whiteness, streaked with blue chasms, hang as if cut off at an immense elevation above the valley, and ready to fall into it. The sky was as brilliantly clear and blue as on our ascent of the Cramont, and the excessive heat of the sun acted powerfully on the glaciers, loosening enormous avalanches, which came thundering down every few minutes, adding their solemn roar to the rushing murmur of the thousand streams trickling down from the melted ice. The sun, though not disagreeably hot, yet at these elevations has a powerful effect on the skin, unknown even in the hottest situations on the plains. My face, which had suffered severely from the sun on the Cramont, was so thoroughly blistered and burnt with a second exposure to its intensified rays, that it completely peeled, and for some time after caused much inconvenience.

The summit of the Montagne de la Saxe is so extended that it was necessary to traverse the different sides of it to take in all the nearer points of view, and, after some time thus occupied, we finally took up our central position on a grassy knoll commanding the most complete view of the whole splendid scene. Unlike the Cramont—where we were perched on a narrow ridge apparently elevated above a great part of the surrounding mountains—we were here placed in the midst of a vast amphitheatre completely encircled by the enormous ranges around us. Mont Blanc appeared wreathed with fringed crests of driven snow, frozen into an icy diadem encircling the smooth, glistening summit. The massy Dent du Géant and the superb Grande Jorasse immediately before us, seemed from here to overtop the monarch, the ridge

from it rapidly descending and trending away to the north-east, from the Petite Jorasse down to the Aiguilles Droites and Mont Dolent. The Col Ferret, with the solitary snow summit of the distant Mont Combin, closed in the east side. The stern, gloomy pyramids of Mont Carmet—naked and deeply scarred on the faces next us, in which appeared an outcrop of white gypsum—intercepted the view towards Monte Rosa. To the southward the lower slopes of this mountain, the Cramont, and the range above St. Didier, covered with dense forests of pine, converged in broad lines of richly tinted light and shade, descending precipitously into the valleys of Aosta and Courmayeur, and, above them all, the glittering snow-peaks from Cogne to the great glaciers of the Ruitor. Westward were the dark peaks of the Cramont and Mont Favre, the granite cone of Mont Chétif, and beyond it, over the Allée Blanche, the snow mountain of Chamooix above the Alps of the same name. To the right of this the Col de la Seigne terminated the long vista of the Allée Blanche, with all its wonderful glaciers in profile, which forms one continuous valley with the branch of the Ferret, together some twenty miles long.

The Val Ferret, which we completely overlooked in its whole length, like a deep fosse, just separating us from the great peaks opposite, was a picture of wild desolation; only a few clusters of stunted larch varying the dreary sterility of the beds of *débris* and granite blocks seamed by the discoloured glacier streams which are collected in it; closed up at the east extremity or head by the glaciers of Triolet and Mont Dolent, which are separated by the Mont Ru.

We had reached the summit before nine o'clock, and remained the whole day enjoying the grand scene, again favoured with a sky of unrivalled splendour and clearness. I completed my sketch of the entire range in continuation of that from the Cramont, while E. explored the summit in all directions, without, however, much reward in the way

of plants. The flowers were all long since over on this exposed Alp, but in one spot we discovered a nearly dry spring in a little hollow, a perfect fairy-like grotto exquisitely fringed with the tiny delicate green fronds of a *Cystopteris*, name unknown, and overhung with thick clusters of the dazzling blue gentian.

Bertolini's care had provided us with a basket of peaches and pears, which, after dining on gressins and sausage, were most refreshing. A hollow near at hand also contained a welcome mass of snow to cool our wine, and furnished water by melting it on slates in the sun; for, though there is a tiny lakelet or pond not far from the summit, its waters are not drinkable. It was late in the afternoon before we left, and on descending we halted for some milk at a lonely group of miserable stone-built huts, the cheese châlets of these pasturages, roofed with rough shingle, and built loosely up in the corners of the rocks, nearly even with and hardly distinguishable from them. The pâtre came out of his cabin with a couple of miserable stunted children, their faces hideously scarred in deep seams. After some hopeless patois, in which I could detect no trace of either French or Italian, he brought us out delicious cream in an earthenware bowl, exactly like a large Highland quaigh.

The interior of the hut was a model picture of the life of an "Alp," in which the one paramount body-engrossing, soul-absorbing interest is cheese. There were neither chairs nor beds, as if they neither sat nor slept; the chief article of furniture being a large brass caldron, which would have held a man sitting—and swinging over a fire of embers on the floor of live rock. Cheeses were hardening in the smoke, while in every direction were strewn a strange collection of milk-pails, pots, pans of all shapes and sizes, and wooden bowls and other cheese apparatus, none apparently used for any other culinary purposes.

The walls were hung with cheese-cloths drying; a couple

of knapsacks, apparently containing the whole wardrobe; marmot-skins, and rows of carved spoons curiously arranged. The herdsman himself was graced with a singular appendage, in the way of a tail, which had a droll effect. His milking-stool, consisting of a stout wooden peg fastened in a curved piece of wood accurately fitted as a seat, was firmly tied on behind, wagging like a stiff wooden tail as he walked about. This caudal appendage, apparently a fixture, explained the absence of seats, while the hay-shed supplied ready beds without the trouble of making. When out with the cattle on the distant pasturages, they build little kennels half sunk in the ground, and covered rudely with flat stones, into which they crawl, and lie coiled up during bad weather. One would be inclined to imagine it a most monotonous dreary life; but, on the contrary, they are all very fond of it, and pine for the free life of the "Alps" when down in the valley.

I had wished to descend on the other side of the mountain from that on which we had ascended, and allow time to examine the singular tunnels or mines called the "Trous des Romains," extending a great way under ground, and anciently worked for a lead-ore containing silver, but now exhausted. Our cowardly muleteer, however, was so terribly afraid of the steepness on that side, and the alleged difficulties and dangers of the descent, that I did not insist on his doing so, which I afterwards regretted, having no other opportunity of visiting these mines. We had, however, the advantage of the grand view of the range of Alps, which is lost on the other side.

The ascent may be easily made from Courmayeur in 2½ hours, and even in much less; and it is surprising how little it is known and visited by travellers, being of such comparatively easy access, and commanding so magnificent a view.

It was starlight when we again reached Courmayeur. Jupiter shone brilliantly over the Val d'Aosta—our route on the morrow. The evening air was deliciously cool and

balmy, and we looked with regretful feelings mixed with the most pleasurable reminiscences on the pale outline of the glorious snow-peaks, now become familiar as old friends, and which during the rest of our tour we should not see again, except from some far distant summit.

Few spots in the Alps have left with us more vivid recollections than Courmayeur, surrounded as it is by the most magnificent mountain scenery in Europe, with commanding points of great elevation from which to scan it with an ease and familiarity rarely attainable. The geologist, the naturalist, the artist, or sportsman, or any one in fact who has higher aims and pursuits than the mere superficial tourist, may find at Courmayeur and in its neighbourhood ample occupation and enjoyment for a long sojourn.

CHAPTER V.

VAL D'AOSTA.

Descent of Val d'Aosta — Scenery — Vines — La Salle — Alluvial mounds — Last view of Mont Blanc — Ivrogne — Villeneuve — Barricaded windows — Châtel Argent — Château St. Pierre — Château d'Aimaville — Goîtres and crétinism — Entrance to Aosta — Hotel quarters, heat, swarms of flies — Cathedral — Bishops of Aosta — Calvin — Anselm — Church of St. Ours — Cool of evening — Moonlight walk.

CONTINUOUS sunshine favoured us as we packed the mule baggage on the 18th of August, to descend to Aosta. Bertolini took so much interest in our intended tour, that he had fully resolved at one time to join in our adventures. Had it been only a fortnight later, when most of his guests were returning to Turin, he would have left his hotel to manage as it might, and accompanied us as guide, with his own mule. He could not, however, prudently leave the party who were regular visitors each season, and he very reluctantly gave up the idea, though only at the last. We shook hands with him, wishing him the success he deserved, and also with our Italian friends, who had all assembled at the door to wish us a hearty "buon viaggio."

The descent of the Val d' Aosta, after joining the route from St. Didier, is by an excellent government road down to the gates of Aosta, a distance of 25 miles. For enchanting variety and contrast of scenery, and in the combination of features of wild sublimity and extraordinary richness, in the same compass, it is almost without a rival. A vast region of snow, ice, and eternal winter, overhangs its head, where only a few patches of sterile granite are bared for a month or two in the year, scattering their shivered fragments, glacier borne, over the desolate rock-strewn valleys. But immedi-

ately below this, in the vicinity of Courmayeur—notwithstanding the enormous frozen masses of Mont Blanc, which cool the pure atmosphere, and retard the spring until May or June—waving crops of corn grew, ripening up to the very edge of the ice. The village of Morgex, a little lower down the Val d' Aosta, was hardly reached, before trellised vines began to appear, their bower-like roofs hung thick with clusters of grapes already turning to purple. These vine trellises are one of the most striking and picturesque characteristics of the Val d' Aosta, and other Vals of north Piedmont, and add vastly to their rich aspect; unlike the stiff formal little bushes which disfigure the Rhenish hills. From the scantiness of soil, and the great drought on the southern slopes of the mountain sides, where their produce is most valuable, comparatively few vines can be grown with advantage in a given space—there not being room or moisture enough for their roots to work in. But they are allowed to make up in size and extent for the want of numbers. Thick gnarled and twisted stems rise to a trellised roof of rustic wood-work, eight or ten feet wide, resting on posts at intervals, and sloping to the back, with just room enough to walk under stooping. Over this the free vines throw their mantling foliage, shading the clustering grapes, which hang through the trellis, like a thickly-fruited vinery, and at the same time protecting the soil from the scorching heat of the sun. They rise in this way in irregular terraces, one above another, up the broken mountain sides, the soil banked up by well-built walls of rude stones, half hidden by the vines of the terrace below; the long trailing shoots wreathing gracefully over every space of bare rugged rock where a bunch of grapes can be ripened. It is not, however, until some distance below Morgex that the vine flourishes in its full luxuriance.

The old castle of La Salle, on which we looked down in our descent from the Col de Serena, now rose above us, on

the left; a finely situated and picturesque ruin, among sloping sunny vineyards, which yield a better wine than any in the neighbourhood. Morgex is now the chief village of the commune, which takes its name fron it, but in former times La Salle would appear to have been the head-quarters of the upper valley; and the castle itself attests to its having been so in the early feudal times, when its well-chosen site commanded so large an extent of it. In the little village of La Salle, below the castle, are considerable remains, said to be Roman, which I much regretted not having known of in time to examine them; and what is equally interesting, we have, in all probability, in the name of La Salle, another vestige of the language of the ancient Salassi, the original Ligurian tribe of Celts who peopled this district.

From here the lovely Val d'Aosta is a succession of pine-covered heights, jutting crags, richly-wooded mountain sides intersected by foaming waterfalls, and castles perched here and there as if their sites were chosen for romantic effect alone. The fertile basin, artificially irrigated, abounds with groves of walnut, among green meadows, crops of maize and hemp; the whole backed up by the terraced vineyards, rising tier above tier half way up the mountains. Between Morgex and Avise, before the Doire is crossed, an extraordinary bed of alluvial deposit almost chokes up the valley, presenting a singular appearance, the road and river having barely room on its flank, where it rises to a considerable height above. At first the idea suggested itself of a moraine deposited during the ancient period, when the glaciers extended so far from their present limits, that—as Studer, Von Buch, and Agassiz have shown—the erratic blocks strewed on the Jura were transported thither by glaciers extending from the northern sides of Mont Blanc and the Oberland—compared with which extraordinary distance that from Mont Blanc to Avise is nothing. But the composition of this vast heap of mud and boulders appeared, as far

as I could judge, rather of an alluvial nature; a more careful examination than I had time to make of the materials of which it consists, whether they are boulders or transported blocks, might perhaps prove that it is the effect of the combined influence both of glaciers and of an enormous pent-up body of water.

The Doire kept us company all the way, its tumultuous ice-stained waters increasing in volume with the successive reinforcements from the vast storehouses of the Ruitor Glacier, by the Baltea torrent and La Thuile; again from the snow heights of the Grande Sante, with the lower mountains on the right, the Col de Serena on the left, and the Vertosant torrent, on which is a fine waterfall. We halted again and again to turn round and look at Mont Blanc, which, with dazzling brilliancy in the midday sun, closed up the head of the valley, each turn bringing fresh combinations of the same glorious scene.

The grandest view of all was from the niche cut on the face of a profound precipice at Fort Roc, round which the road creeps with startling boldness, occasionally suspended on a mere wooden scaffold, clinging to the crags. Sitting on the low parapet, we looked down from it into a profound abyss, clothed with dense forest, which we overhung; one tree-top appearing below another, with their broad rounded masses of foliage, from the brightest to the deepest shades of green. Far down at the bottom of all, in dim obscurity, the Doire foamed furiously in a narrow chasm, from which its roar reached us fitfully, as the breeze rose and fell. Looking upward from this giddy depth, the eye caught sight of a new range of snow mountains, where, at a turn to the south-east, the lower valley now opened out, bathed in a rich haze of ruddy sunlight, shaded off into the deep blue distance. These mountains form part of the glacier ranges near Cogne, and are singularly beautiful in their forms, especially as seen further down the valley. At the upper end Mont Blanc,

like an enormous mass of cold glistening alabaster, still towered into mid air, far above the walls of mountains which shut in the valley on either side; their intersecting bases, clothed with the richest wood and dark pine forests, forming a long vista, at the end of which the monarch was enthroned. The brilliant azure sky overhead, the deep dark chasm below, with the foaming torrent, the vast piles of icy mountains, the glowing valley on one side, and the sombre forests on the other, form a scene rarely surpassed. It was our last lingering look, except from a distance, at Mont Blanc, as a little lower down the valley it is soon shut out from sight, nor did we wish to disturb the last impressions of that glorious vision.

The walnut-trees with which the Val d'Aosta abounds are magnificent, and the thick groves of them and the Spanish chestnut, which embower the road, afforded a grateful shelter from the hot sun. Their foliage often formed a continuous overarching green roof, supported as on columns by their massive and rugged trunks, and with the soft turf and verdant banks made the perfection of a noonday halt. Ferns abounded among the shaded moss-grown rocks and trickling streamlets, and among them we found *Polypodium calcareum*, with fronds of most unusual size, near Fort Roc. On the side of a deep circular hollow, opposite Ruma, the village and castle of Avise, among the steep vine-covered slopes, is one of the sunniest spots in the whole valley. At a bridge lower down, which crosses a rapid torrent, we caught a fine view up the Val Grisanches, and a gorge, through which the pent-up stream rushes.

We stopped for refreshment at the Ecu at Ivrogne, not very tempting quarters, and the only access through a sort of miscellaneous shop and kitchen, both pervaded by a particularly penetrating odour, anything but savoury. The hostess assured us she had excellent beds, for which we took her word, but declined her very pressing requests that we would

stay and try them. Ivrogne could certainly never have derived its odd name from any immoderate consumption of wine such as the Ecu afforded, which was simply execrable, and our muleteer wisely confined himself to a *petit verre* of absinthe. Much excellent wine is, however, produced here, and the whole country through which the road runs, from Ivrogne to Arvier, is one continuous vineyard, intersected here and there with plots of maize. On the opposite declivity the terraces of trellised vines are carried up to the base of the highest cliffs, crammed and jostled in every possible cranny, curiously supported and often apparently hanging in the air. The labour and care taken in their construction is wonderful, and attests as well the value of the produce as the influence of a southern aspect. Every available spot far up the steep mountain sides enjoying that aspect is terraced in this manner, with hardly an interruption, all the way down to Aosta, giving an appearance of the most luxuriant richness and high cultivation, like one continuous garden. The opposite side of the valley is shut in by a lofty precipitous wall of mountain, strangely called the Côte de l'Enfer, and on the very edge of the crest the church of St. Nicholas stands out against the sky with a singularly clear effect. The Spanish chestnuts, too, are of remarkable beauty and size.

After losing sight of Mont Blanc, there are few finer scenes in the valley than the opening into the Val Savaranches and the Val de Rhèmes before reaching Villeneuve. On a romantic knoll rose a white spire embosomed in trees, between two forest-clad summits, which seemed like outworks guarding the entrance, and above them snowy peaks and glaciers. Beyond the Châtel Argent, down the main valley, was a rich burst of purple and jasper-hued mountains, glowing in the sunset with a vividness and depth of colouring which alone would have told us we were again in Italy.

As we entered Villeneuve by an avenue of noble walnut-

trees, a row of "usines" by the roadside, with their furnaces, were roaring and belching out their ruddy flames, where the rich iron-ore of Cogne is worked. The ore, a magnetic oxide, is brought down from the mines in the mountains above Cogne, 8350 feet above the sea, on the backs of women, men, and mules, and is of excellent quality.

The streets of Villeneuve are thoroughly Italian in character, but a singular feature in the houses, quite peculiar to this valley, and which appeared to us remarkable enough in its more remote recesses—as Courmayeur, the Tarentaise, or even such an out-of-the-world place as Chapiu—becomes the more unintelligible as one descends into the populous districts and larger villages and towns. The windows of the lower stories are universally barricaded with cross gratings of stout iron bars, even in the meanest dwellings, giving a strange prison-like look, and a feeling of insecurity suggestive of brigandage. Yet the Valdotians are not more turbulent or predatory in the present day—whatever they may once have been—than other Piedmontese, but on the contrary are held in as high estimation in Piedmont as the Savoyards elsewhere; nor is it merely the older houses that are thus barricaded, but in the recently built ones the same custom is continued, one which no one we inquired of could account for, except on the popular principle that it had always been so; a singular instance of the force of habit where the necessity resulting from the insecurity of former troubled times no longer exists. To redeem this grim aspect, however, the houses of Villeneuve and other villages we passed through, were decorated by fine plants filling the numerous balconies which overhang the narrow streets—such as beautiful balsams, large asters, and oleanders which were masses of rose-coloured bloom. When these or other flowers appeared to be out of the reach of the owners of a balcony, their place was supplied by artificial flowers planted in large pots, very deceptive at a little

distance. On several of the country houses curious round pots of red earthenware with a hole in the centre were hung up against the walls, as our muleteer told us for "gibier," which he ultimately admitted to be sparrows, the squabby unfledged brood being doomed to an untimely fate, and devoured as delicacies.

A round tower and the ruins of the old Châtel-Argent stand out boldly, on a lofty promontory of rock, near to Villeneuve; the name said to be derived from the circumstance of a mint having existed there in the fifteenth century. Just before the broad bed of the Doire is crossed below, a steep mule-track of steps cut in the lofty cliff like a staircase, is the way by which the iron-ore is brought down from Cogne. As we passed, a long cavalcade of mules, and women bending under their heavy burdens, were descending it. Further down the valley the grapes were nearly ripe in the continuous vineyards. The trellises here were supported next the road on a sort of elongated battlement like pillars, built on the neat roughcast and whitewashed walls. As one passes along the road the show of dense clusters of purple grapes pendent from the leafy roof is most charming. The vineyards of Torette opposite Aimaville are the most celebrated in this district, producing a good sound wine of a light claret quality. The beauty of the vineyards, however, was in many parts sadly marred by the ravages of the mysterious vine disease, and in place of the rich black clusters were often only a few withered, mildewed little bunches, utterly worthless, while the leaves and stems were stained and stunted with the same devouring pest. It had prevailed here for some years, and was still on the increase.

On the right as we descended, a most remarkable and conspicuous snow-peak rose high above the glacier-fields of Cogne like a great horn, with a sharp straight ridge on the north side, so distinctly defined that one half was brightly illuminated with the rosy light of the setting sun, while the

other was in twilight shade. We recognised it as the Corne de Cogne, the same peak we had seen from the Cramont.

From La Salle down to Ivrea, the Val d'Aosta abounds with castles perched on its eminences as in the valleys of the Rhine and Rhone, adding in no small degree to the interest of its rich natural scenery. The finest of those above Aosta is the Château St. Pierre, planted on a lofty isolated cliff, rising from the green meadows. The foot of the castle is encircled with its gardens and orchards, in which is the priest's house; above them the church; and the summit of the rock is covered by the old castle rising from its little cluster of attendant buildings. It existed, according to the Chanoine Carrel, in the eleventh century, and was rebuilt in 1630 by one of the Roncas family, who obtained it from the last descendant of Jean Veuillet, an Aostan noble.

Below St. Pierre, on the other side, is the Castle of Aimaville; its present fantastic exterior an intrusion among the other time-honoured structures of the feudal ages. It contains, however, an ancient armoury, and belongs to the Counts of Rocca Challant, to whose house it passed in 1354, from the Barons of Aimaville. The four corner towers were added to the building by the Count Aymon de Challant and his sons Antoine the Cardinal and Jacques; and the outside galleries which run round between them were constructed by Joseph Felix de Challant, who died in 1702; so that the bad taste for which it is conspicuous cannot be laid to very modern times. A large smelting furnace rises close to it, where the Cogne iron is reduced. In the reign of Augustus, after the subjugation of the Salassi, Aimaville was the residence of Caius Aimus of Padua, who with his son Caius Avilius built the beautiful and remarkable Pont d'Ael, in the Val de Cogne, part of an aqueduct, of which little else remains. Below Aimaville a wide sweep of the Doire flows under the foot of the castle-crowned rock of La Sarre; the château was acquired and rebuilt in 1708 by the Baron Ferrod, who, un-

fortunately for himself after all his outlay, was compelled to restore it to the heirs of the former owner some sixteen years after.

The landscape was now sinking into twilight, though the lofty peaks of the Becca de Nona and Mont Emilius, overshadowing Aosta, were still tinged with the sunset glow. Fields of tall maize irrigated by trickling canals, and shadowed by huge walnut-trees heavily laden with an overflowing crop, now stretched along each side of the road; the cicadas were singing lustily after the heat of the day; and as we neared Aosta the brilliant light of distant lime-kilns glowed on the mountain side from among the dusky wood and copse. It would have seemed the realization of a valley of enchantment but for one hideous blot which disfigured the whole—that of human deformity and degradation in every shade and form of goître and crétinism, regularly increasing in the number of its victims from Ivrogne to Aosta, until, as we neared the "city of gardens," every other person was affected with one or more of those fearful maladies, many with both. The hideous misshapen crétins, with their stunted limbs, huge heads, dull eyes, lolling tongues, and every shade of imbecility down to a step below the brutes, are however far more repulsive than the goîtreux—who seem to bear their great bladder-like lumps of glandular flesh covered with knots of blue veins, as if they were no burden.

It was evening lighted by the young moon when we entered the city of Augustus by the Porte de Savoie, the ancient Porta Decumana; and a long, narrow, and straight street—reminding us of the Babuino at Rome, in its wide doorways and groups of commodities and people about, with the central gutter, and indefinable compound of odours—led us into a square, the Place Charles Albert; one side occupied by the modern façade of the Hôtel de Ville. A part of this building is appropriated as an hotel, the Ecu de Vallais, the first impressions of which are very imposing, and apt to

delude the traveller who has a weakness for luxury. We entered through the kitchen, where the *chef* was busy among a chaos of pots and pans, and messes savoury and unsavoury, and soon found that, instead of being represented by the whole magnificent exterior, the hotel was confined to a few rooms in the entresol, and a gallery or two behind, on a common staircase, haunted by paupers and crétins. Our rooms were good, but in the sala where we supped, swarms of flies blackened the tables, struggled by scores in the soup, buzzed on the dishes, thickened the ruddy vin d'Aosta, crept into our eyes, mouth, and ears, and pervaded everything. Large fly-flappers lay on the table, with which we made temporary clearances, managing to eat and drink at intervals, until a waiter came in and operated for us, as if quite used to the work. It was a relief to turn out into the piazza or colonnade in front, at the end of which were one or two cafés frequented by a number of citizens and officers in Piedmontese uniform, lounging, smoking, and discussing the latest news. Joining them, I got a pile of Italian papers, from which, over a cup of coffee, I gathered some idea of what had been doing in our absence in the mountains.

The heat was stifling, and the atmosphere most oppressive, after the pure elastic mountain air we had been breathing. The thermometer in our bedroom did not fall below 80° all night with doors and windows wide open, while at Courmayeur the highest night temperature had been 62°. We had, however, earned our rest, and neither the heat nor the fleas, which were most actively disposed, disturbed us.

The next day was Sunday, and we remained quietly within doors until the cool of the evening, except a visit to the cathedral at morning mass. It was well attended, and most of the peasants were in the costumes of the Val d'Aosta. The cathedral, which is in a confined situation some little distance behind the Place Charles Albert, stands on the site of one of earlier date, having been restored by Gontran,

King of Burgundy, at the beginning of the sixth century. On the site of the Hôtel de Ville columns were found, supposed by Chevalier Promis to have been those of a basilica, which, if it were ever used for Christian worship, would have been the early church. The ruins of a building near the Porte de la Trinité, however, have been called both a basilica and a theatre.

Aosta is supposed to have been erected into a bishopric in the fifth century. Eusebius, Bishop of Vercelli, and the supporter of Athanasius of Alexandria against the Arians, has the credit of founding the see. After the Council of Milan, in 355, when Athanasius was condemned by the three hundred Bishops, the minority were exiled by the Arian party, and foremost among them Eusebius, who retired to Scythopolis, in Syria. On the accession of Julian, however, he returned to his former see at Vercelli, and resumed his episcopal labours, amongst which was the erection of Aosta into a separate bishopric, on account of its extreme distance, and the difficulty of access from Vercelli. The first Bishop, Protasius, was succeeded by St. Grat, the great local saint of the Val d'Aosta. The hermitage of St. Grat, on the mountain side, opposite the city, is the object of frequent pilgrimages, public and private. The cathedral boasts amongst its relics of possessing his body, and also that of St. Jocondus, the successor of St. Grat in the episcopate.

Amongst the succeeding Bishops, Gazin of Vercelli distinguished himself as a vigorous and uncompromising supporter of Roman Catholicism in his diocese. When Calvin came over from Geneva, encouraged by his success on the Swiss side of the Alps, and endeavoured to propagate the reformed doctrines in the southern valleys, he not only met with no success, but was compelled by the inhabitants to fly for safety. He escaped, according to some, by the Great St. Bernard, but, as others assert, with greater probability, by the more difficult and less known pass of Cher-

montane, from the Val Pellina. So zealous were the people of Aosta in their attachment to their faith, that they erected a monument to commemorate their triumph over one of the great leaders of the reformed movement, which threatened to shake the church of Rome to its foundations. A column, restored in 1841, stands near the intersection of four cross streets in the heart of the present town, with the inscription :—

HANC CALVINI FUGA EREXIT ANNO MDXLI, RELIGIONIS CONSTANTIA REPARAVIT ANNO MDCCXLI, CIVIUM PIETAS RENOVAVIT ET ADORNAVIT ANNO MDCCCXLI.

There is a singular custom of ringing the mid-day bells at 11 o'clock, which hour is called Nona, and it is popularly believed to have been done ever since the flight of Calvin, which is asserted to have taken place at that very hour. But our friend, Professor Cavagnet of Aosta, in some interesting communications respecting this custom and the word Nona, gives a different explanation. The Romans, he says, dined at the ninth hour, or 3 P.M., and the word Nona has been preserved as the name for the dinner-time, while the hour itself has been continually changed. The custom of dining at eleven having, in the course of time, ultimately prevailed, they introduced the ringing of the Angelus bell at eleven also instead of noon, especially on account of the fast-days, when the country people were scrupulous about dining before the Angelus bell sounded.

Another Bishop of Aosta was Cardinal Bobba, a distinguished member of the Council of Trent, his speeches during which were thought worthy of being printed. But amongst its distinguished men Aosta records, with especial pride, the name of Anselm, who was born here in 1033—and afterwards exercised so great an influence in our own country. In early youth he ran into such excesses and dissolute courses that his family abandoned him, and he went into France, where he at length retired to the monastery of Bec; distinguished

himself by his studious habits, and became a Benedictine monk, and subsequently Abbot of Bec. A journey to England, on business connected with possessions of the abbey in that country, introduced him to the court of William Rufus, who with great difficulty prevailed on him to accept the vacant Archbishopric of Canterbury in 1093. His subsequent contests with that King and his successor, Henry I., form a well-known and remarkable chapter in the history of England. His influence and popularity among the people were as extraordinary as the power he exercised over the King and clergy—the latter of whom he forced in spite of every effort on their part to submit to the decree of rigid celibacy, those priests who refused to put away their wives being excommunicated—while the prelate, single-handed, vigorously asserted the supremacy of Rome above the King in all ecclesiastical matters, especially that of church patronage.

But of all its illustrious ecclesiastics, the one to whom attaches the most wide-spread and the most enviable fame is St. Bernard, who held the Archdeaconry of the Cathedral, and has left behind him the imperishable title of Apostle of the Alps. His remains rest with those of St. Lawrence in the Cathedral of Novara, where he died in 1008. The present Bishop, Monseigneur Jourdain, was raised to the see in 1832. The Bishop's palace is close to the Cathedral, a large building with spacious gardens, and decorated internally with frescoes of the Bishops of Aosta and the Princes of Savoy.

The interior of the Cathedral is spacious and handsome, containing some monuments of interest. Not the least of these is a large marble font, anciently used for immersion, which primitive mode of administering baptism obtained in the north of Italy until a late period. Pope Stephen III., in the middle of the 8th century, is reputed to have first sanc-

tioned sprinkling in special cases, but it never obtained
rally until a long subsequent period. By Calvin, ho
this form of administering the sacrament was excl
established in the Genevan churches, and all the
abolished; though his persistence in the latter was one
prominent causes of his unpopularity at Aosta, and,
other matters, compelled his ultimate retirement from G
to Strasburg. Since then, immersion has gradually
into disuse both in the Roman Catholic and Pro
Churches, though in the Greek Church it remains to th
the only admitted form of baptism.

Among the sepulchral monuments in the Cathedr
those of Emeric de Quart, and Des Prés, Bishops of
of the respective dates of 1371 and 1511. Another, of
marble of early date, on which is a fine statue of one
Princes of Savoy, has been attributed variously to T
I. and II. and Humbert. The bodies of St. Grat a
Joconde, already referred to, are enshrined in silver dec
with precious stones. There is also a silver bust of
bishop Anselm, and the reliquaries contain a numl
"genuine relics," such as the lower jaw of John the B
a thorn from the Holy Crown, &c. The choir is pave
excellent mosaics, one of which has been engrave
M. Aubert. The Cathedral is dedicated to the Virg
St. John the Baptist, to the latter of whom the principa
chapel is consecrated. The Provost and Archdeacon
twelve Canons, a minor canon, and three honorary c
share the revenues and perform the duties. Outside,
the building, we found a beautiful but much neglecte
cloister, the arches and capitals of the light shafts ext
elegant.

Beside the Cathedral there is the collegiate chu
St. Ours, outside the Porte de la Trinité, the lofty
campanile of which is a conspicuous object in the

views of Aosta. St. Ours, who has supplanted St. Peter in the dedication of the church, was a Scotchman, it is said; the miracles which were worked at his shrine were so distinguished that he was canonized, and his relics are preserved in the church. Anselm I., Bishop of Aosta, was one of the most liberal benefactors of this foundation, which supports a prior and twelve canons, formerly under the rule of the Augustine order. The canons' stalls in the choir are well carved, and were executed under the superintendence of one of the Challant family, who was prior between the years 1474 and 1509. An adjoining cloister was interesting, though we had only a hasty glance at it, intending to return at another time, which never came. The capitals, richly carved with numerous figures and legends, rest on shafts of black marble.

In the cool of the evening, the streets, the Place, and the cafés were crowded with people enjoying the fresh air after the heat of the day, and we strolled by moonlight outside the walls, among the quiet gardens and vineyards which skirt the city. The gentle breezes, and the rushing sound of the numerous little streamlets which irrigate the fields and gardens, were delightfully refreshing. Jupiter rose brilliantly over the towering Becca de Nona, which is a grand object to the south of Aosta, while the pale light of the crescent moon shone over the distant glaciers of Ruitor. The grasshoppers chirped in the vineyards and maize-fields, and the crickets in the old Roman wall accompanied them. Every one seemed to have suddenly revived, and to be unwilling to lose an hour of the lovely night, and it was past midnight before we ourselves returned to our close rooms. We had found it necessary to keep the doors carefully locked, as it turned out that the upper stories of the grand Hôtel de Ville were tenanted by lodgers of the lowest class, chiefly crétins, who used the same common staircase as ourselves; and whenever we came out of our rooms, we generally found a group of these squalid hideous wretches grinning and loitering about

the steps and landings, which they made as filthy and odoriferous as themselves. It is but fair, however, to say that the landlord had no control over this, and the accommodation, as far as his efforts were concerned, was good and clean. The only other hotel in the town, the Poste, was much inferior. A new one has since been started under the auspices of a Chamouni guide, reported to be good.

CHAPTER VI.

VAL D'AOSTA.

Aosta — Antiquities — Triumphal arch — History and conquest of Salassi — Foundation of Roman city — Augusta Prætoria — Plan of streets and gates — Porta Prætoria — Walls — Mediæval remains — Porte de Bramafam — Amphitheatre and Roman remains — Sœurs de St. Joseph — Cafés and journals — Pilgrimage to the Hermitage of St. Grat — Return of procession — College — Tour du Lepreux — Lepers — Goître and crétins — Xavier de Maistre — Preparations for the mountains.

OUR first object was to explore the Roman remains, for which Aosta is famous; and on the Monday we sallied out soon after seven, by the Porte de la Trinité, on the road to Turin, as the most satisfactory point from which to commence a general survey. At the end of a small suburb outside the walls, the Buthier torrent, which runs down to the Doire from the Val Pellina, is crossed by a modern bridge; and in front of it, spanning the road, stands the Triumphal Arch of Augustus. The view through it from the eastward of the city, and the distant mountains and glaciers, is a beautiful picture. The Buthier torrent has changed its course completely since the period when the arch was built, and now flows much closer to it than formerly. The ancient bed and the Roman bridge which crossed it—the arch half buried in sand and gravel—may be found together in a little suburb, called Pont de Pierre, at a short distance eastward of the modern bridge.

The arch itself is entire all but the attic, and in general design resembles the arch of Titus at Rome, as distinguished from those of Severus or Constantine, which might have been expected from its much earlier date. Like that of Titus, it consists of a single arch, with four columns on each face, an

intermediate one at each end, and a recess like a doorway on either side of the archway, between each pair of columns. But the shafts of the pillars are here plain, not fluted, and have Corinthian capitals, with a Doric entablature. The attic—on which probably was, or was intended to be, the dedicatory or commemorative inscription, as in the above-mentioned instances—no longer exists, and is replaced by a tiled roof, to the great detriment of its original proportions. There is no sculpture on the frieze beyond the ordinary Doric triglyph, neither on the spaces between the columns, nor, as in the arch of Titus, under the arch itself. This absence of one of the most important and interesting features of a triumphal arch, is probably to be accounted for, by the want of sculptors in the district competent to do such work. In the contemporaneous arch at Susa, erected by Julius Cottius to Augustus, the sculptures are of the most rude and barbarous character. The Roman builder, in neither instance, has united the sculptor's art with his own; and while the architectural details are good, the relievos have either been left to native Ligurian artists, as at Susa, or altogether omitted, as at Aosta. The material of which the arch, and also the old walls, is composed, is a very remarkable pudding-stone, consisting of small rough lumps of gneiss, quartz, schist, and various metamorphic rocks, all cemented together; and, I was informed, was procured from a vast quarry which once existed at Quart, about four or five miles from the city. A crucifix now stands, supported by iron rods, across the arch, where the winged image of Victory was suspended over the head of the Emperor as he passed under on his triumphal entry.

This arch was erected by Terentius Varro, the General of Augustus, to commemorate the establishment of the Emperor's rule, after the final conquest of the Salassi. This hardy people, as has already been alluded to, maintained possession of their native fastnesses against the Roman

legions, the last of all the Ligurian tribes; and contested it with a resolute pertinacity, which cost their invaders dear. Entrenched in their mountain strongholds, they set at defiance the superior advantages of the disciplined and civilized Roman legions; and were only at last overcome by stratagem.* They were of the same stock as the Taurini, Graioceli, Centrones, Caturiges, and the other Highland Ligurian tribes, who probably withdrew entirely to the mountain ranges of the Cottian, Graian, and Pennine Alps, when driven back by the invading Etruscans; as the ancient Celtic Cymri did in Britain, under similar circumstances. According to the local antiquaries of Aosta, the Salassi advanced from Gaul, across the Alps, under the leadership of Cordelius—a descendant of no less a person than Saturn himself, and moreover one of the Generals of Hercules—who appropriated the then uninhabited valley, and founded a city, on the site of the present Aosta, which he named Cordele. This event is modestly fixed at 406 years before the Roman era, and 1159 before Christ. We may, however, safely admit the authenticity of the name, and leave the Valdotians the belief in its antiquity.

As to the relations of the Salassi with the neighbouring tribes, we have seen, on the authority of Polybius, that they joined not only with the Ligurian tribes, the Taurini, Libui, and others, but also with the Gallo-Celtic Boii and Insubres, against the Romans, in the great Gallic war, B.C. 226; when, as Gallenga observes, the number of combatants on both sides exceeded that of the very largest hosts brought into the field, in later times, by Napoleon himself. They were not however conquered, but only driven back, and the Salassi retired on their own strongholds. At the commencement of the second Punic war, B.C. 218, they do not seem to have been unfavourable to the intentions of their allies, the Boii and

* Dion., Hist. Rom., liv. 53.

Insubres, in sending the deputation over to Hannibal. The Carthaginian army, in fact, does not appear to have met with any opposition from the Salassi, nor is any mention made of Cordele, from which we may conclude they merely marched through it, as a friendly country, down to their first halt in the plains, at the mouth of the Val d'Aosta.

The Salassi pursued an entirely different policy from that of their mountain neighbours; who had been compelled into an understanding with the Romans, which eventually resulted, after various struggles, in the submission of twelve of their tribes, who became allies of Rome, with Cottius, their former king, at their head, as Prefect; and by whom the triumphal arch was erected to Augustus at Susa. The Salassi were of a different mettle, for Livy tells us * that Appius Claudius only partially subdued them, with the loss of 10,000 troops. Strabo moreover says, † that, "whether at war or at peace with the Romans, they still maintained their power; inflicting loss on them whenever they passed through their territory. They compelled Decimus Brutus, on his flight with his troops from Modena, to pay a denarius or six sesterces a head as indemnity; and when Messala wintered in the neighbourhood, he had to purchase from them the wood for fuel, and the elm spear-shafts for their exercises. They also sometimes carried off the treasures of Cæsar's army, and under the pretence of assisting his movements, by repairing the roads and erecting bridges, they laid wait for his troops on the tops of precipitous places. At last Cæsar conquered them, and sold the whole of them as slaves at Eporedia (Ivrea); which had been built as a Roman colony, and for a protection against the Salassi, although it was of little avail against the native tribes, until their race was blotted out. 36,000 of them were thus sold by Terentius Varro, including 8000 men-at-arms. Augustus sent 3000 Roman soldiery, and founded a city on

* Livy, Epitome, liii. † Strabo, Geog., lib. iv.

the site where Varro had encamped, after which the whole district was tranquillized, and the highest mountain passes secured."

By this unscrupulous and wholesale deportation of the inhabitants, all possibility of future contests was put an end to, and a large number of them were incorporated into the Roman legions.

Not long after the erection of this arch, which was about the 724th year of Rome, or B.C. 29, Augustus himself visited this noble valley, which now afforded him such facilities for the transport of troops across the Alps, in his Gallic expeditions; and attracted by its richness, the mines of gold, silver, copper, and iron, and the admirable site of the old city of Cordele, he determined to build upon its ruins a Roman fortified station of the first class, to accommodate the three legions he had sent there. He laid the foundation himself, B.C. 20, and gave it the name of Augusta, as he had that of Augusta Taurinorum to the restored city of the Taurini, distinguishing it with the additional title of Prætoria, as he honoured it with the residence of a Prætor, or military governor.

The form of the city was an oblong square, enclosed by solid stone walls, and laid out with streets and gates, on the then received principles of Roman castrametation. On examining its measurements, they correspond very nearly with those of the "castra tertiata," or camp of three legions, as laid down by Hyginus,* who was camp surveyor in the time of Trajan. The dimensions he gives of such a camp are, 2400 Roman feet in length, by 1600 in breadth. The actual measurements of the walls of Aosta are 2424 by 1903 Roman feet, thus giving a somewhat greater breadth, but the general correspondence is near enough. General Roy gives, as the result of his investigations, the length 2232, and

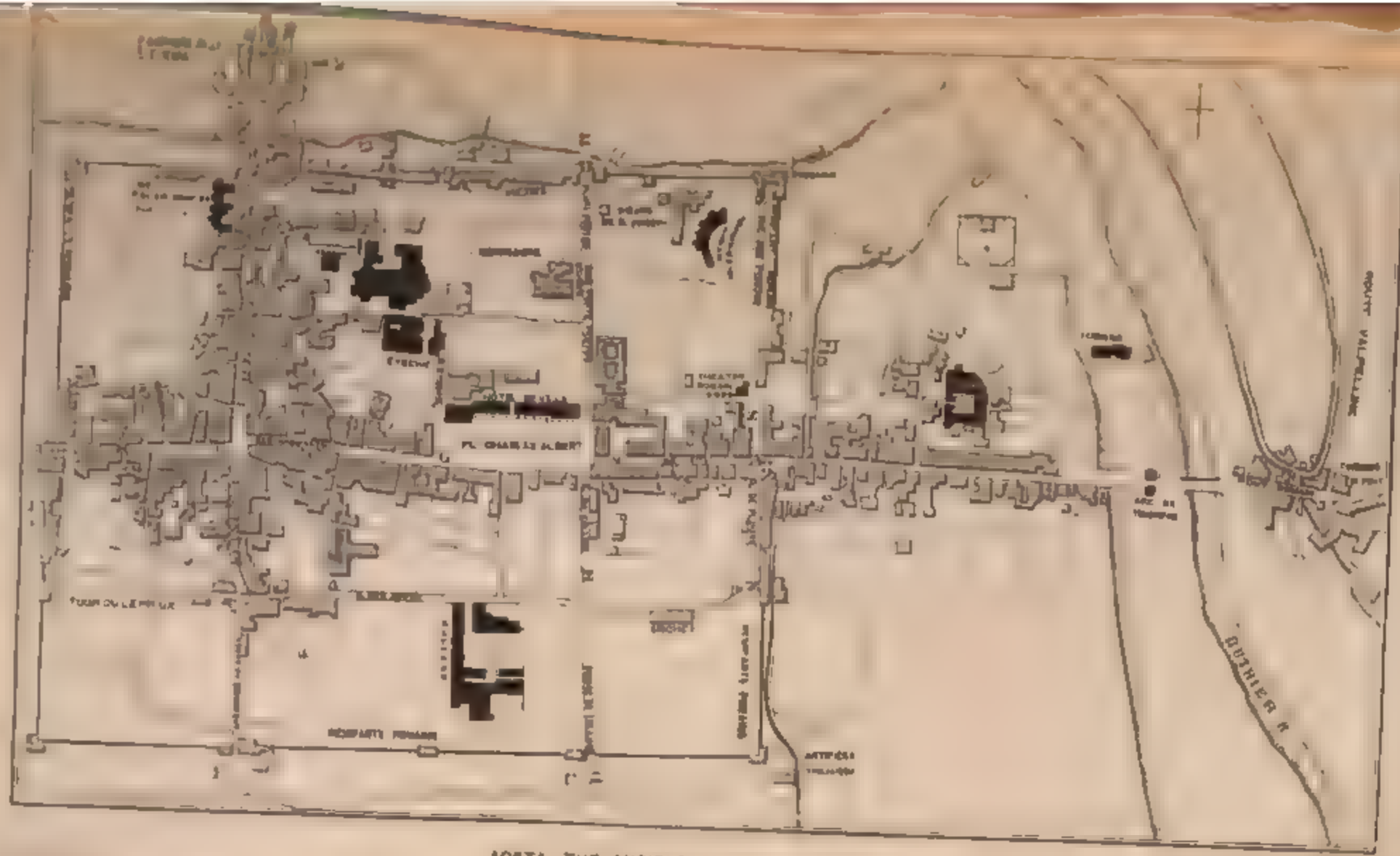
* Hygini Gromatici de Castrametatione.

breadth 1620, where the relative proportions are nearer to those of Aosta, though the actual measurements differ. The system of castrametation, as described by Polybius, who makes it a perfect square, most certainly was not followed here, and the Romans seem greatly to have modified their plans of entrenchment, as in use previous to the Emperors.

On looking at the annexed plan of modern Aosta, and comparing it with the outline of Hyginus's camp, a remarkable coincidence will be at once seen between the two, in the arrangement of the present streets, which are almost exactly those of Hyginus. The main street, from the Porte de la Savoie to the Porte de la Trinité, only varies from the line of the original Via Prætoria in the casual irregularity of the houses. The Place Charles Albert occupies the exact position of the "Groma," or surveying staff, placed at the intersection of the Via Prætoria and the Via Principalis; the line of which latter is exactly followed by the street between the Porte Pertuis and Porte du Collège. The Via Quintana is preserved in the Rues du Follier and Mal Conseil, where Calvin's cross stands; and what appeared to me clearly vestiges of the Via Sagularis, just behind the Prætorian and the Decuman gates, exist in the present Rue des Prisons, and Ruelle de Plouve, on either side of the former; and at the Decuman, or Porte de Savoie, in the Ruelle Malherbe, and the lane opposite, leading to the Tour du Lépreux.

Whether the four lateral gates all existed originally, it is difficult to say without very attentive examination, as they have been much altered and built up to.* The Porte Pertuis, and Porte du Collège, however, undoubtedly correspond with the Porta Principalis dextra, and Porta Principalis sinistra. The Portes de Bramafam and Mal Conseil I believe also to have been the outlets of the Via Quintana,

* The Chevalier Promis, professor of architecture at Turin, whose reputation and knowledge of Roman remains well qualify him for the task, has, I understand, made long and patient researches into the antiquities of Aosta, and intends very shortly to make the results of them public.



AOSTA THE ANCIENT AUGUSTA PRÆTORIA

which were more likely to have been made in a permanent city than in an ordinary camp; indeed we have evidence that the Porte de Bramafam was called the Quintana, up to 1240, when it was renamed Porte Beatrix.

The Porte de la Trinité, the gate by which the city is entered from the triumphal arch, after passing through a small suburb, is the Porta Prætoria. According to the rule of Vegetius, the Prætorian gate "aut orientem spectare debet, aut illum locum, qui hostes respicit." In this case the east has been adopted as the aspect, because the direct approach to the city from Italy was by this side, and the enemy was probably considered as entirely extirpated, their places being supplied by Roman settlers. It is a fine and interesting example of the construction of this part of the Roman military cities, and is in good preservation, though the external casing of hewn stone has been in great part taken away; yet, such is the solidity of the masonry, that its strength seems in no ways diminished. Such of the outer courses as have been left are very massive, and consist of a veined grayish marble, quite different from the materials of the triumphal arch, and quarried about Aimaville and Villeneuve. The gates are double, each consisting of three arches—a large central, and two smaller lateral ones—and parallel to one another; with an intervening distance of some 13 yards. This forms an enclosed court, 13 yards by 22, and may have been originally covered in, for the accommodation of the Prætorian Cohort. The north side, which is a lofty tower, was perhaps the Prætorian residence.

Vestiges of Roman drains, or cloacæ, have been from time to time found, as in the house of M. Ansermin, when excavating at depths from 3 to 12 feet, running east and west, north and south. One of them traversed the Via Prætoria, at a depth of 5 feet under the middle of the street. The old pavement has also been discovered, consisting of well-fitted polygonal blocks, like those at Pompeii, and 8 feet

below the present level of the street. Along each side of the street ran a raised causeway, corresponding to the two side arches of the Prætorian gate. An admirable and cleanly feature of the modern streets of Aosta is the stream of water, which, cool and fresh from the mountains, runs down each side of several of them.

On either side of this gate the old walls without the city are not easily examined, as they are blocked up with houses built into them, only affording a peep of the original wall here and there. We made our way round to the southern side, where they are most perfect and accessible. Turning to the right, immediately outside the gate, a narrow lane conducts through these buildings, which cease at a square side tower, and then under bowers of trellised vines, supported on the walls down to the south-east angle—which is flanked with a square tower, as are all the others. Here a little stream turned a water-mill, where we found they were grinding down fir-bark, and expressing the oil by a rude process. The south wall is very well preserved, showing clearly its original construction. The hewn ashlar which faces it is a remarkable calcareous deposit, more or less like marble, and showing, in many places, impressions of leaves, twigs, &c.—in fact, a regular travertine. I could not at the time ascertain satisfactorily from whence it had been quarried; much of it is like the blocks of the arch of triumph, and probably it all came from the same beds at Quart. It is now, after centuries of exposure, extremely hard and compact, and is highly wrought and finished. The courses are of oblong blocks, smooth and well fitted; each course being of different thicknesses, the effect of which is very good. The interior of the wall is of rubble, boulders and gravel, firmly cemented together by mortar which is now hard as granite. Great part of the facing has been pillaged at different times, both for the construction of the mediæval buildings on the walls, and the houses of the city. Towards the south-west angle the wall is

almost entire, and the projecting cornice, or finish, may be distinctly seen. The ground falls considerably to the west, and the wall is adapted to it in a singular manner. At intervals the whole wall and cornice drop in successive breaks, the courses interrupted like "faults" in a mine, without any attempt to conceal it. Where it is most perfect the entire height is about 23 or 24 feet. Inside the walls, at regular distances of about 45 feet, they are supported by buttresses of masonry. I have noticed the square towers on the eastern walls, between the Prætorian gate and each angle; there are three similar ones on the south side, which are Roman at the base, but have been much altered at different periods.

The Porte de Bramafam is one of the most interesting mediæval remains of Aosta. A large round tower has been built on, or close to, the original one, with the stones taken from the wall; and next it are the outer walls of a large building, formerly part of a castle of some importance. Various conjectures have been made as to the origin of the name Bramafam, and the popular tradition—which generally has some kernel of truth in it—attributes it to a story, sad enough not to have been forgotten. The tower and castle were the residence of the Challants, the Viscounts of Aosta, who possessed paramount power and influence in the valley. One of them, René de Challant, married the Princess Mincie of Braganza, and in a fit of jealousy shut her up in this round tower, where she was starved to death; and the tower went ever afterwards by the name of Bramafam, or "brama fame." There are, however, matter-of-fact people, who have a spite against such traditions, and assert that the Princess died happily at Vercelli, and that the name was given to it during the dearth which commenced in 1337, and lasted three years; when, as governors of Aosta, the Challants collected the provisions here, and doled them out to the famished people.

The tower at the south-east corner is in ruins. We

climbed to the top of it, where amongst the grass and stones we nearly sat on a huge snake, which had just changed its skin, and was contemplating its cast-off suit of scales. From here one sees how little of the space within the walls is inhabited; not more than one third of the ground is built on, and the remainder is now occupied by gardens, orchards, arable, or waste ground. The gardens and vineyards outside the wall, and under its warm shelter, were extremely rich and beautiful. Mulberry, fig, walnut, and almond trees were loaded with fruit, tall maize grew luxuriantly, and gourds filled the trenches between the rows, or wreathed their vines, covered with great orange blossoms, over the hedges. On the old walls we found the largest and finest specimens of *Asplenium ruta-muraria* I ever saw, the fronds densely fructified.

The western walls have had two towers on either side the Decuman Gate, as is the case on the eastern side. The one to the south, altered in the middle ages, has been made famous as the Tour du Lépreux, by the Count Xavier de Maistre, in his novelet, 'Le Lépreux de la Cité d'Aoste,' in which he has so touchingly portrayed the thoughts and feelings of an unfortunate leper, who spent his days here, isolated from the world. We deferred the examination of it to another time, and continued our tour of the walls to the Decuman Gate, or Porte de Savoie, by which we had entered from Courmayeur. On each side of it the walls are encrusted with clusters of modern houses, and there are but few remains of the gate itself. But it is clear again towards the north-west angle, on which is another large tower. The north wall, especially at the Porte du Mal Conseil, is interrupted with buildings, sheds, &c.; passing under fine shady trees by a bright stream of water, we entered the city again by the Porte Pertuis.

The space within the north-east angle of the walls is occupied by the Convent of the Sœurs de St. Joseph, within the

garden walls of which are some interesting Roman remains. Finding the gate open, we entered, and met the sisters just coming out from service in their small chapel, dressed in black, with white caps and capes, and black veils. One of them volunteered to accompany us to the ruins. In a meadow close to the Convent are the remains of the ancient Amphitheatre. There is not much left but the under passages or vomitories, a portion of which are tolerably entire, and vaulted over about 6½ feet wide; but the stone facings have been carried away. The dimensions of it are estimated, by the Chanoine Carrel, at 154 feet across the middle, and 197 feet in length. The wall on which the successive ranges of seats were raised is about 42 feet wide, and the arena was surrounded by a vaulted gallery 10½ feet wide.

Beyond this, about 100 yards to the south, in another enclosure, approached by a vine-bowered walk, stood the fine remains of what has been called the Theatre, and also the Basilica. From its position it evidently formed no part of the amphitheatre; and as Aosta was under the government of a Prætor, a suitable basilica would no doubt be provided for the holding of the courts of so distinguished a magistrate.* Only a portion of it is left, which consists of four stories or stages one above another, the ground range arched for the purpose of access; the one above, blank wall; and the two upper, open arches, probably for light and air.

While I was examining and measuring the ruins, the sister was interesting E. in the details of their establishment, and enlisting her sympathies on behalf of their labours. She was a Frenchwoman from Lyons, where is one of the chief convents of the Sœurs de St. Joseph, which sends out its members to all parts of the world; and she inquired, as if we of course knew them, after some of the sisters of the order.

* The Chevalier Promis assigns the columns and remains found on the site of the present Hôtel de Ville to the ancient basilica, and his investigations will probably throw much light on this interesting point.

who had gone to their Convent, the well-known "Bar," at York. The establishment at Aosta consisted of thirty-three nuns, though they were in fear that the recent convent laws would be extended to it also, and lead to its dissolution before long. Their especial function was that of education, keeping a mixed girls' school, which, beside day pupils, numbered about thirty boarders. Of this number only one was of noble family, the majority being of the middle class, with several poor. The wealthier pupils paid 25 francs a month, the poorer 20 francs, though the chief difference in their treatment appeared to consist in little more than that one had fine white bread, while the others had to content themselves with the rye bread of the country. Beside their scholastic duties the sisters visited the prison close by, an asylum for poor children, the hospitals, the poor generally, and among them the crétins. Those who had not taken the black veil had the prison duties assigned to them. A plot of ground, once a cemetery, was pointed out as the young ladies' garden, in a corner of which a doll dressed as the Madonna had been characteristically installed by the pupils, as the patroness of their childish sports. The sister, on bidding us farewell, promised her prayers for us, as she said she believed we were true Christians, and there was a genuine kindness and atmosphere of charity about her, united with great simplicity, which won our hearts.

The corner tower on the walls close to the Convent, now used as the prison, is the most perfect of the whole. The remains of what was the Forum, according to M. Carrel, may be seen in the garden of the Archdeacon's house, and in the two neighbouring houses of MM. Duc and Bochet. He concludes that there were eighteen arches or doorways on each side the building, the width of the arches 8 Roman feet, and that of the piers 4. In the middle of the Forum were baths, of which the fine remains are preserved in the "Maison Théologue," or Divinity School.

Returning to the Ecu de Vallais after our long day's ramble round the city, hungry and glad to rest, we found the plague of flies worse than ever; fresh reinforcements appeared to have arrived during the day, and we were almost devoured. Every dish and wineglass, sauces, sugar, mustard, &c., had to be close covered with plates and all kinds of contrivances, from under which we stole morsels at a time, and with the fly-flappers kept a clear course to our mouths; but they took advantage of the slightest relaxation and nearly drove us desperate. We were glad enough to get out again and join the crowd of strollers by moonlight, in the Place Charles Albert.

The cafés are the centre of the life of Aosta, but many of the loungers about them must have been unprofitable customers, as they never seemed to take anything, content to smoke their pipes, and loiter in and out with their hands in their empty pockets. The newspapers in Piedmont are less dull than most others on the continent, as almost all subjects are discussed with a freedom and unreserve more approaching to the liberty of our own press; though not yet quite tempered and restrained from licence by the influence of sound public feeling. This is naturally accounted for, when one considers how recently the people and press have been introduced to that novel freedom in political and religious discussion, so long familiar to ourselves. The 'Gazetta del Popolo' has the largest circulation, though it is but a single sheet, quarto size, price five centesimi. The 'Armonia' is the principal organ of the church; the 'Unione' of the liberal party, though not democratic, and professing to support Catholicism: but I was much amused by an article in it recommending as the best mode of adjusting Eastern matters, then pending, that the Holy Land should be given up by the Sultan in exchange for the Crimea, and the Pope, leaving Rome, take his seat in future at Jerusalem, letting whoever chose submit to him! Beside these are other Turin journals, as the 'Opinione,' 'Diritto,' &c., and the

'Fischietto,' as free and as amusing to an Italian reader as 'Punch' with us. Aosta has two local papers at least, the 'Feuille d'Aoste,' and the 'Indépendant.' A number of the former contained a reply to an article in the 'Gazette de Savoie,' denying the truth of the ascent of Mont Blanc on the Courmayeur side, by Mr. Ramsay, before mentioned as having been effected on the 31st of July. The Chamouni guides, jealous of the monopoly of Mont Blanc, affirmed the utter impossibility of climbing the perpendicular wall on the south side, which no one denied; but the Count Vinciano showed that by reaching the Aiguilles du Midi by the Col du Géant, and then the Mont Blanc de Tacul, and Mont Maudit, Mr. Ramsay and his party had discovered a route from Courmayeur, not hitherto explored, and shorter than that from Chamouni. It was amusing, however, to notice that the 'Feuille d'Aoste' spoke of the guides only as the discoverers; and Mr. Ramsay, who had organised and paid the whole expedition, was casually mentioned as "l'Anglais qui s'était joint à eux."

Another much more important subject was, however, agitating the Aostan public, and excited a good deal of angry feeling and discussion. The glorious weather in which we as travellers were revelling, had dried up everything—rain was devoutly wished for by all but ourselves, and the usual resource in such cases, and according to ancient precedent, was a pilgrimage to the hermitage of St. Grat, on the mountain above Aosta—a last resource, and which was affirmed never to have been ineffectual. A request was accordingly presented to the Chapter, but was refused on the ground of some alleged impropriety of language. A report was at once widely spread through Aosta and all the neighbouring villages, that the Chapter, taking advantage of the wants of the people, refused the procession unless they got a considerable sum to pay themselves and the attendant expenses, such as mules, food, &c.—on former occasions defrayed by them.

Others asserted that the idea of the procession was entirely got up by themselves, for their own profit. Angry articles appeared in the papers. The 'Indépendant' stigmatised the calumniators of the Chapter, as men who would destroy for ever, religion, princes, the altar, the throne, "et étrangler le dernier des rois avec les boyaux du dernier des prêtres!" In short, all Aosta was in a greater ferment than can easily be imagined on occasion of such a trifle. On all sides, however, the Chapter seemed to have the worst of it: many were the jokes and sarcasms of the cafés, and the days of respect for such ceremonials were evidently gone by. Ultimately the Chapter issued a protestation to the effect that, without taking notice of the calumnious reports abroad, but out of consideration for the urgent necessity, and to satisfy the desires, of the pious population, they had decided in assembly to make the procession at their own proper charge, as in former years: concluding with the singular challenge of offering a medal of 1000 francs value to any one who was able to prove one of the charges against them.

The procession assembled early in the morning at the Cathedral, and, after matins, was marshalled, and set off for the hermitage before we were up, as announced by the jangling bells. It was not expected back until late in the afternoon, when we agreed to walk out to meet it. Pleasant winding lanes through the vineyards, green orchards, and maize-fields, outside the southern walls of the city, led us down to the banks of the Doire, where we seated ourselves in a hay-field among the fragrant new-mown grass, and enjoyed the lovely scene at leisure. The Doire sweeps over a broad bed crossed by a long wooden bridge, the lofty framework of which looked perilously crazy, and a portion of it had been carried away and rudely repaired, making crossing at night anything but safe. Beyond the bridge, at the mountain foot, was a curious little chapel or oratory, double grated in front, through which might be seen the faded flowers and other

paraphernalia of an altar. Behind this the mountain rose steeply, its side covered to a great height with rich copsewood and trees, above which was the overhanging peak of the Becca de Nona. Far up amongst the wood in which it was embosomed, the little white chapel, the hermitage of St. Grat, just showed itself, and with the telescope I could distinguish figures moving down as if the procession were descending.

We sat for more than an hour looking at, and discussing, an ascent of the Becca de Nona, from which is one of the most magnificent panoramas of the whole chain of the Pennine Alps—extending one after another in one long dazzling range without an intervening peak. No one who visits Aosta, and has the opportunity of making the ascent, should miss it. We deferred our attempt, and subsequently took a much higher, but far more difficult point, on the Cogne range, and shall never forget the scene that rewarded us. But the Becca de Nona, with far less fatigue, and no risk, gives a lower but splendid view of the same distant Alps—of which the Chanoine Carrel has published an admirable panorama, with notes and description, than which there cannot be a better guide. The height of the mountain is 10,383 feet, and for the elevation the ascent is not very difficult, and may be accomplished on mules; which with guides are to be had at the hamlet of Charvensod. If this ascent were better known it would become one of the most popular in the Alps.

At length a soft strain, like aërial music, reached us, and shortly swelled into the distinct cadences of many voices chanting a plaintive Gregorian; when the procession was seen winding, like a long broken streamlet, down the zigzag track among the dense trees. The effect of the harmony, mellowed by the distance, was thrilling. The forest was falling into shade; the sun's rays, slanting over the glassy ice peaks of the Ruitor, lighted up the snow masses of Mont Combin and the dark pine forests of the St. Bernard,

and threw a ruddy glow on the campaniles and picturesque outlines of Aosta. The Doire at our feet murmured a grave symphony to the distant voices, and the chanting rose and fell, as it was caught up at intervals by different parts of the procession; the shrill trebles of the women, the well-trained choristers, or the deep tenors of the priests. Soon the head of the long file reached the little chapel on the opposite bank, where each party halted in turn, for a short service, and then crossed the bridge. First came a cross, borne aloft, with banners and carved and gilt lanterns on poles, followed by 150 women, two and two, dressed in long white robes and white hood-like veils. Then another crucifix and banners, and some 150 men wrapped in mantles of brown sackcloth, and all with rosaries of white beads. Another cross headed a long double file, which we ceased to count, of women enveloped in black calico; followed by a large body of men, in the same sombre garb, with the addition of black hoods; then about the same number, perhaps 200, in white; and lastly the priests closed up the whole procession, which must have been more than a mile long.

The penitential shades of black, brown, and white, of the processionists' robes, were relieved by the umbrellas of bright pink, green, and yellow, which many of them carried to keep off the hot sun, or to be ready for the hoped-for deluge. A canopy of crimson embroidered satin overshadowed the Archdeacon, who carried in his arms the head of St. Grat, enshrined in silver. He and the canons were robed in their embroidered vestments of crimson and white satin, and gold; but looked dusty, hot, and tired, though they continued to chant with apparently unflagging energy. But we could not look at them, as they marched past in slow time, without thinking of the angry articles in the papers, and the gossip at the cafés, and speculating as to how far their personal feelings, as well as their rational convictions, were in accordance with their functions.

A mixed crowd closed up the rear, and we fell in with them and followed to the cathedral. When all had crowded into the building, the effect was most striking and solemn. The sinking sun shot his long beams, from one or two upper lights, through the spacious naves already deepening into twilight gloom. The choir and the high altar blazed with myriads of candles, before which rose a cloud of incense from the attendant acolytes; and when the organ pealed forth, and caught up the strain from the priests, as the Archdeacon elevated the host, the dense mass of kneeling penitents, in their varied costumes, who crowded the body of the cathedral, bent to the ground as one man. All was hushed for a moment as the benediction was pronounced; the organ again pealed out a joyous fugue, and the wayworn pilgrims dispersed. Unfortunately for the prestige of St. Grat and the procession, the heavy heat drops, which had damped the clothes and gladdened the hearts of the processionists as they started, were the last which fell for many long and cloudless days.

The weather indeed was so magnificent that we began to be anxious to be on our way to the chief part of our tour, which lay before us, and also to exchange the scorching heat and dust of Aosta for the bracing air of the mountains. We had, however, several preparations yet to make, which required another day's delay, and we took advantage of it to revisit and sketch the Tour du Lépreux, which we had only cursorily looked at on our round of the walls.

The street opposite to the Ecu leads straight to the National College, an institution of great importance to the Val d'Aosta, and which deserves a few words in passing. According to information, for which I am indebted to the Abbé Cavagnet, one of its professors, the instruction given in it is gratuitous, the students being subject only to a payment of 10 francs per annum, which small sum is called "minerale," and is applied to the treasury of the province. The number

of the professors amounts to thirteen, and the list of the different departments they fill is interesting, as showing what branches of education are esteemed most important or useful. For Grammar, Italian, Natural History, History and Geography, Statute and Civil Law, and Theology, there is one professor for each respectively: two for Philosophy, and two for Rhetoric. Mathematics seem to form no part of the College course. There are several boarding-houses, where the students are fed, lodged, and clothed, free of all expense. Nothing can be more liberal than the encouragement thus given to education in the Val d'Aosta. The College was anciently a convent specially intrusted with the instruction of young people. The Oratorians, Barnabites, Jesuits, and laymen, have each in turn taught in it. Now the charge of the education is in the hands partly of the secular clergy and partly of laymen. Foundations made by private individuals have provided several new professorships, and the provinces and the government have done the rest. The revenue is said to be about 13,000 francs a year. The number of pupils has reached 160, but of late it has been somewhat less, in consequence of high prices and the dearness of provisions. The University of Turin sends a professor every year to visit and inspect the College.

Turning to the west at the college, the houseless street and a narrow-winding lane between garden walls, lead to the scene of Count Xavier de Maistre's narrative. It stands near the Hospital of SS. Maurice and Lazare, and that of La Charité. By order of the king it was purchased and fitted up in 1773, at an expense of 6220 francs, or about 250*l.*, for the reception of four lepers, who were placed in charge of the former Hospital. De Maistre only alludes to two of them, the last survivors. Those who have read his touching delineation of the feelings and life of these unfortunate beings, cannot but look with lively interest at the little tower and its gardens where they dragged on their unhappy existence,

Tour du Lépreux

shunned by all but the priest and the doctor. It stands on the base of one of the old Roman bastions, built of the materials taken from the wall, and, as De Maistre relates, is also called the Tour de la Frayeur; being reputed as haunted by ghosts; many of the "elderly ladies" of Aosta remembering distinctly their having seen, during the dark nights, a tall white female figure come out of it, with a lamp in her hand.

The name and history of the lepers seems to have been carefully concealed; but M. Carrel, in his notes on De Maistre's narrative, clears up the mystery, from the entries in the registers of the Hospital. They were all of one family, Guasco by name, from the district of Nice. Father, mother, and four children were all afflicted with the same disease; and singularly enough the leprosy showed itself in the children first. Obtaining no relief from their own doctor—who among other remedies used "viper broth," a famous

specific in this malady with the ancient physicians, as Aetius, Aretæus, Paulus Egineta, and others—they came to Moncaliere, near Turin, where the mother and eldest son died. The others were sent to Aosta in 1773, and soon afterwards Pierre Bernard Guasco, and Marie Ange Lucie, his sister, were left the only survivors. But, though living under the same roof, they were almost entirely isolated from each other, neither daring to encounter the loathsome sight of the other's affliction; and also from a groundless fear, on the brother's part, of increasing by contagion his sister's malady, as she was the less afflicted of the two. They met for devotion in their little oratory, on the priest's visits, with averted looks, lest their meditations should be distracted. The garden plot was divided by a trellis covered with hops, through which the two held their only converse, and Pierre passed most of his time in his garden or on the terrace walk with its views of the distant glaciers, and the labourers in the field; while his sister retired to her chamber, or to the shade of a group of old walnut-trees, to brood over their wretchedness.

So great was the fear of contagion, that the leper never touched the flowers which he gave away, but with the scissors. He seems to have been frequently bled, and M. Carrel relates the horror of the doctor, on some drops of the leper's blood spirting into his mouth. It is a remarkable case, having afflicted a whole family; and what is especially worthy of remark, all the children were affected first, and then the disease showed itself in the parents, who died much earlier than their children. The question whether leprosy was contagious or not was long mooted; but, in its present modified form, is now admitted to be non-contagious. The disease known as the leprosy of the Jews, and of the middle ages, when it ravaged Europe — the true Elephantiasis of the Greeks, and the Lepra Arabum—had its origin in Egypt. We know that the Israelites were affected by it during their captivity there; and it is somewhat remarkable that many

ancient writers, from Manethon to Tacitus, have asserted that they were banished from Egypt on account of the leprosy which infested them; this, however, Josephus refutes. Moses has minutely described it in the Levitical Code, and laid down strict injunctions respecting the relative treatment of those affected by the different degrees of it.* He regarded the more virulent forms as highly contagious, and those infected by them were separated from the congregation. But in the milder forms—some of which were not true elephantiasis, but the now not uncommon Lepra vulgaris, or white scale—the leper was not considered unclean; and in later days we find our Saviour sitting in the house of Simon the leper.

About the time of Christ leprosy began to spread north and westward from Egypt and Palestine, and swept by degrees over the whole of Europe, until in the times of the Crusaders its ravages attained a universal and frightful prevalence. In our own country, as elsewhere, lazar-houses were established in vast numbers, and munificently endowed as the great charitable work of the day. Any one returning from the Crusades affected with this plague was an object of extraordinary attention. This rapid and terribly active spread certainly argues contagion or infection of some kind, as it could never have been so disseminated by mere hereditary transmission. Nor was its gradual decrease less remarkable. After the last Crusades its virulence abated by degrees, until in the reigns of the later Tudors the lazar-houses were almost unoccupied, and their vast endowments diverted into other channels. The advances of civilization, and the general improvement in the moral and physical condition of society, seem to have gradually modified the general symptoms, and in the last century it all but disappeared; lingering, however, in the Scandinavian territories, as on the

* Leviticus, ch. 13, 14.

coast of Norway and in Iceland, where its prevalence, though in a mitigated form, has attracted the attention of the Government. It also exists in the Crimea, the Grecian Archipelago, Madeira, and the West Indies—though this leprosy, the true elephantiasis, is not to be confounded with the horny swelling of the leg, known incorrectly by the latter name.

The symptoms which affected the lépreux of Aosta were identical with those of the virulent leprosy of the middle ages. The eyebrows, eyelashes, and beard fell out, the cartilages of the nose disappeared, leaving the skin only stretched over the bone, and the face was one great scar. His sister's face showed no marks, but the hands and other parts of the body were affected, especially the chest. The fingers became ulcerated, their joints swelled, and the fingers bent back, and a joint of the left forefinger fell off without pain. The attention which this case received, and the special measures taken to isolate the sufferers, indicate the rarity of the disease at that period; and it may be regarded as one of the last instances of it in its aggravated form in recent times, unless it be in the localities already alluded to. Pierre Bernard, the last of the unhappy family, died in 1803, after a residence of more than thirty years in the solitary Tour du Lépreux.

It seems strange, while such care was taken, and expense incurred, to isolate these poor lepers from all contact with their fellow creatures, that a far direr evil, that of crétinism, and its ally goitre, should have been so long left unchecked and disregarded, affecting, as this double malady does, so great a proportion of the population of the Val d'Aosta. The masses of glandular wens, often as large as the head, hanging like wallets about the neck and shoulders, are revolting enough to look at; but crétinism, in the many loathsome forms it assumes, of besotted vacancy, dwarfed elfishness, hideous disproportion, and generally conscious degradation, affecting every fourth person one meets, is the

most melancholy spectacle of the defacement of God's own image which the world can present. Every human feature is hideously caricatured; beside which, they are often deaf and dumb, and almost always incapable of giving a rational answer.

The relative situations of Aosta, and Martigny in the Valley of the Rhone, where both scourges prevail, have many remarkable analogies, but their occurrence in the latter is as nothing compared with Aosta—the head-quarters of these frightful maladies, which more or less affect half the population from Villeneuve to Châtillon. And why such should be the case is a question far from having been as yet satisfactorily solved. The Valdotians generally concur in attributing it to the filthy habits of the lower classes, who live in miserable dark hovels, along with the animals, never changing their clothes or dreaming of washing. But though this may be true to a great extent, the real predisposing cause must be sought elsewhere. The people of Aosta are not more filthy than many other Italians or even Irish. The highest classes moreover, though in a less degree, are liable to the same taint, though crétinism is not so frequent as goître; and while the marriage of crétins is ostensibly forbidden except in very mild cases, it is a well-known fact that their children are often perfectly healthy; and the offspring of healthy parents may be crétins, and are constantly affected with goître. The latter, too, rarely shows before the age of puberty, and females are the most affected. The word "goître" is merely a modification of the Latin "guttur," or throat, the thyroid glands of which are the part affected; and the deformity is not unfrequent in this country in hilly districts, where it is known by the name of the "Derbyshire neck."

If it were attributable to snow or glacier waters, as has been stated, the disease should be most prevalent near their source, but both at Aosta and Martigny the cases diminish in proportion as a higher altitude is attained.

Dr. M'Clelland has endeavoured to show that both maladies are more prevalent on certain geological formations, such as the calcareous, and rarer or altogether absent on the granites and metamorphic series; but this is rather the result of the relative position and altitude of these formations, than of any influence of their own. I feel inclined to attribute them in great measure, if not entirely, to local atmospheric influence, aggravated by hereditary transmission and the habits of the people. The conditions which seem most favourable to their development are, marshy undrained situations, where there is a constantly humid atmosphere, and close confined heat; and at the same time they are in some as yet inexplicable manner connected almost entirely with the lower regions of mountainous districts. It is I think far from improbable that that mysterious, and still imperfectly understood atmospheric constituent, ozone, might on examination be found unduly deficient in these localities; and as its temporary absence has been proved to be intimately connected with the appearance of epidemic diseases, so its constant deficiency might tend to the production or continuation of such a strange and mysteriously prevalent local affection. This is a matter for experiment and scientific observation, but it has been observed that much of the exhilarating effects of the air of high mountain altitudes is owing to the presence in abundance of this remarkable condition of oxygen, and in precisely those situations the disease gradually diminishes, and disappears in the highest.

Still much of the misery, as it now exists, is doubtless owing to the filthy habits and dwellings of the lowest classes; and though the marriage of cretins is legally prohibited, yet a vast amount of wretchedness is still illicitly perpetuated, which might be prevented. Stern as it may be thought, I can see no measure calculated to rid the country of this scourge, but the general provision of public asylums for the separate sexes, like the old leper-houses, to which every cretin should

at a certain age be sent for life, and supported at the expense of their own communes. Each commune would then find it their own interest to establish and enforce, as a mere matter of economy, such strict sanitary and physical regulations as would strike at the root of the evil. The asylums would afford a most valuable though painful field for the study of this fearful disease of mind and body, and their establishment under proper surveillance could no more be regarded as an infringement of the laws of human liberty, than our own invaluable lunatic and idiot asylums.

In the Val d'Aosta, however, crétinism and goître are from habit hardly regarded as calamities. As Juvenal, in his day, says—

"Quis tumidum guttur miratur in Alpibus?"

so now no one cares for it to be known that he has brothers or sisters crétins, and the goître is so universal that it seems to be considered as a necessity, and the absence of it rather a subject of pleasantry. Crétins are made constant sport of, and baited for amusement by every one a little better than themselves; and though this strikes a stranger painfully, I ultimately came to the conclusion that the poor creatures rather liked the attention.

From the meadow under the Tour du Lépreux I got a sketch of it and the old Roman walls, with the Tour de Bramafam in the background. The band of a regiment of Sardinian Chasseurs was playing merrily while the troops were exercising in the parade ground just outside the Decuman Gate.

Xavier de Maistre died in 1852 at St. Petersburg, having entered the Russian service on the French invasion, and attained the rank of general. He came to Aosta in 1793, where he resided five years, during which time he formed a passionate attachment to a Madame de Collaret, a widow of great personal attractions, who, though she did not marry him, seems to have exercised a strong influence over

him in after life, and is introduced in his story as the young bride whose happiness so deeply affected the poor leper. He lived to the good age of 89, his mind fresh and full of romance until late in life; and his sentiments may be gathered from a letter at the age of 65 to his old love, his "chère Elise," in which he says—"Le mal et le bien ne sont jamais à notre disposition; tout l'art de la vie consiste à tirer le meilleur parti des circonstances forcées dans lesquelles on se trouve"—no bad philosophy if rightly carried out.

Our last day at Aosta was devoted to completing our outfit, deciding on what could be dispensed with, and reducing all to the smallest compass. Everything superfluous we sent on in the two cases, by Châtillon, Ivrea, and Biella, en route to Varallo; at the two former of which places it was to await us a certain number of days, to enable us to deposit accumulated specimens, or replenish our wardrobe. Some portable provisions were requisite to provide against probable emergencies; and accordingly we made a round of the shops of Aosta, amongst them the bookseller's, of whose stock in trade literature formed an infinitesimal part; some notebooks we got were bound, shame be it said, in vellum leaves from fine old illuminated missals. Provisions were remarkably cheap; we laid in a bag of rice, sugar, and cinnamon and spices for mulling bad wine. Peaches were plentiful at 10 sous, or 5*d.*, a lb.; and sound Aostan wine, notwithstanding the prevalence of the vine disease, might be had at 1 franc 10 sous, or 15*d.*, a bottle. One of the most useful purchases we made was an Italian sausage, a slice or two of which often afterwards gave a relish to a hard crust, when nothing else was to be had.

Aosta has an excellent apothecary's-shop, the Pharmacie Gallesio, where I got an unguent, "Saponule Ammoniacale de Steers," which gave immediate relief to the sprain from which I had been suffering, and I can highly recommend it

to the pedestrian in like cases. The Frères Gallesio informed me that they kept Holloway's ointment if I preferred it, and we were amused to see half a side of the Aostan papers covered with flaming advertisements of its virtues, accompanied with a hideous list of unnameable disorders in which it was certified to be infallible on the authority of the "Lord Maire" of London! There was some difficulty in getting a circular note cashed, there being no correspondent nearer than Turin; but at last that was effected by making the payment of the landlord's bill dependant on it; the money was soon forthcoming, and I took it in the new gold 10-franc pieces, which were very useful and portable. In the Val d'Aosta a napoleon is universally called a "*marengo.*"

The only remaining want was a mule for the journey. A peasant from Valpelline, Créton by name, who came in to Aosta to market, was brought to me as a likely person. He agreed to send a proper muleteer and mule by 5 in the morning, so that we might easily reach the last châlets above Valpelline before night, and have time to see the mines at Ollomont on the way. Everything was now arranged, and we hoped to accomplish the pass of the Col de Chermontane, and visit the glaciers, which we had been unable to do from Orsières. We then purposed, after exploring both reaches of the Val Pellina, to try and effect a passage from it over into the Val St. Barthélemy, and from thence to the Val Tournanche. The weather was unbroken, a brilliant moon shone above the Becca de Nona, as we took our last evening stroll in the Place, and our good fortune in cloudless skies and fair weather seemed likely to continue.

CHAPTER VII.

VAL PELLINA. — VAL D'OLLOMONT. — VAL DE BIONA.

Mule, muleteer, and baggage — Start for Val Pellina — Views above Aosta — Rovent and trout stream — Valpelline Difficulties - Copper-smelting works Ollomont — Mines Night at the Châlets of By — Smuggling Alpine life — Bed in the hay — Fenêtre de Chermontane — Glacier scenes - Return to Valpelline — Hospitality — Ascent of Val de Biona — Quarters at the Curé's — Châlets of Prerayen.

THE mule promised by Créton from Valpelline did not make its appearance until so long after the time that we began to imagine we had been deceived. When it did arrive, we found the owner, who accompanied it, such a surly independent fellow, that we seemed no nearer a start than before. He declared first that he could not, and then that he would not pack the saddle-bags on the mule, and that we must get an additional one for them—giving the mule a kick and a sharp jerk on the bit, by way of illustrating his temperament. He soon, however, discovered it was of no use, as I told him he might pack them forthwith, or go back without us; when he sullenly helped me to cord and strap them on—while the fat cook in his white cap and apron, and a group of ragged crétins, looked on.

We were now in marching order for the remainder of our tour, having nothing more with us than what was barely necessary for the next two months. The two saddle-bags contained all miscellaneous requisites, while our wardrobe, the cooking apparatus, spare wraps, plaid, and herbarium fitted into the waterproof saddle-case fastened behind the saddle, and lying securely on the back of the mule. I had had the saddle edge furnished with a number of rings to

which to append various little matters of convenience, and to receive the cords which made all secure and steady. A side-saddle thus loaded—however small the baggage may be—requires much care and nicety to adjust its balance; very much of the rider's comfort and safety, as well as the ease of the mule, depending on its firmness. I invariably had to pack everything myself, as each of our muleteers in turn seemed to have so little notion of doing such matters neatly and handily, that if I ever left it to them I always had to do it again myself; generally finding they had used up all the straps and cords in absurd knots before the packing was half done. The weight of all, on starting, was not more than 60 lbs., which—as E. generally walked half the day, and always down the descents—was a mere nothing for a mule.

At length we got off at eight o'clock, leaving Aosta by the Porte Pertuis, and by the shady trees and gardens outside the city. We had lost the cool of the morning, and the broiling sun poured down on us with full power as we climbed the vineyard terraces above Aosta, on the Gignod road. We had a noble view from them of the beautifully situated city and the wonderfully rich and lovely valley in which it is embosomed; the Doire sweeping through it in a long sinuous line from west to east; among bright meadows, groves of trees, and wooded slopes, vineyards, and maize fields. In the midst of this rich scene, the campaniles and white houses of the city of Augustus stood enclosed within the distinct quadrangular outline of the old Roman walls, surmounted by the battlemented towers of the middle ages—now in their turn ruins. Majestic ranges of mountains, and distant glaciers, encircled the whole, as if to guard the happy valley from the intrusion of all that might mar its beauty or repose; and yet—fair and Edenlike as it seemed from here—we knew too well the hideous curse that hung over its inhabitants—a deformity of mind and reason, as well as of body, degrading thousands of them to a level almost below that of brutes.

From such thoughts it was pleasant to turn one's face once more to the fresh mountains and the bright glaciers at the head of the Val Pellina. The glistening snows of Mont Combin appeared above the trellised vines, while under their shady roofs hung the thickly clustering purple crop—lusciously tempting to the sight.

Half an hour before reaching the Church of Gignod we turned off to the right from the St. Bernard route, and struck up the valley, by a path above the Buthier torrent, through rich meadow slopes, and under the refreshing shade of the fine walnut-trees with which it is thickly wooded. The bushes in blossom by the road side, the woodland glades, and the flowery meadows, were enlivened by hosts of butterflies, especially Fritillaries, Clouded yellows, and *Hipparchias*—and the waving grass, the fresh air, and bright flowers, brought back again the joyousness of spring time, after the semi-tropical sensations of Aosta; where the shrill cicadas singing day and night, the great violet bees, and the scorpions basking in the hot stone-walls, reminded us more of Sicily.

Halting in front of a little frescoed oratory, by a few cottages mantled with gourds and old vines, we had a commanding view of the deep valley from north to south. To the southward the three peaks of Mont Emilius, including the Becca de Nona, were now distinctly separated, with the miniature glacier of Arpesson in the centre, facing the north. The relative height of the Becca de Nona was also apparent from here, its altitude being 10,381 feet, while that of the highest point of Mont Emilius is 11,785. A little to the west, and behind it, once more rose the beautiful and singular peak of the Corne de Cogne, or Grivola. Its eastern side, glistening in the sun, was divided by the most sharply defined ridge, from the west flank, now in deep shade—as from the upper Val d'Aosta we had seen it in the setting sun, tinged with a rich golden carmine—its eastern side then in shade.

To the north, in front of the glaciers of Mont Combin—which we kept before us all the way—was a central mountain called the Petit Brusson; and in rear of this, and between it and Mont Combin, I judged to be the whereabouts of the Fenêtre de Chermontane, for which we were now once more making. At the foot of it, where the bases of the mountains intersected, was the hollow in which lay Valpelline. On the side of the valley, opposite to us, the white spire of Roysan rose from among the deciduous trees, which in refreshing contrast to the endless pine forests here clothed the cliffs down to the bottom of the valley. There the torrent of the Buthier, before it is lost in a profound gorge, is spanned by a picturesque pointed stone bridge, connecting the two sides of the valley at an accessible point. From the windows of the ancient château of Gignod—the square tower of which still stands on an eminence above—they must have had a splendid view.

The next little village, Rovent, the last before reaching Valpelline, delighted us with its beautiful situation on a rushing trout stream bright as crystal, which works a mountain shoeing forge and one or two little mills. Fed from the clear mountain springs, and untainted by glacier water, it abounds in trout, and I longed to stop and follow its bubbling course with my fly rod through the lovely little glen from which it issues.

Our guide Glaissier was about as uncommunicative as he could be, without being uncivil—which he found an unadvisable line—and in clearing up some doubts about several localities marked on the map, I had recourse at last to the only peasant we met with on the road. The poor old woman, however, had but one ancient tooth apparent in her head, and mumbled such fearful shreds of patois that I was obliged to give it up, with thanks for the information she was anxious to convey.

Here cultivation ended abruptly for a time; the valley

contracting to a narrow defile, the path follows the Buthier, along the side of a rock-strewn hill of fine gneiss, very bright, with beautifully white veins of felspar foliated with green mica and grey quartz. Larches were sprinkled thinly on it, and abundance of barberry bushes glowing with their drooping clusters of scarlet fruit. We also found the Bladder Senna plentifully.

The other road from Aosta to Valpelline, by Roysan, runs along the opposite bank, and the narrowing sides of the glen shortly compelled our path to cross over to it by a slight bridge over a chasm, below which the torrent rushed furiously. The track on the other side, for a little distance beyond the bridge, was unguarded, and E. had a narrow and most providential escape, her mule starting back at a sudden report from a chasseur's rifle close at hand. Most fortunately its hind feet just rested on the extreme edge of the chasm, into which another inch must have hurled both without a chance of escape.

We entered Valpelline at noon, having taken ample time on the way, as usual, which did not appear to gratify Glaissier as much as it had done ourselves; and he was not in the pleasantest humour when he arrived. At the entrance to the village I was surprised to find smoking furnaces and extensive buildings, with heaps of refuse, blackened scoria, and other indications of large smelting works—as I believed they were at Ollomont; some distance from there, up the valley. I found they had been moved down to this place nearly two years, and the ore is now brought from Ollomont to be smelted here, in consequence of the much greater facilities for obtaining wood for fuel. The workmen, who were just returning from dinner, all saluted us most respectfully and civilly; and indeed throughout the Val we invariably met with the same, and a cheerful "bon jour" or "salute" on passing. Our guide was the only exception, and when we arrived at a little cabaret off the track, to which he

took us, he coolly informed me he had so much to do at home that he could not go on with us to the Fenêtre de Chermontane as originally agreed. I went to search for Créton, through whom the arrangements had been made at Aosta, and who had sent him; but on confronting them it was evidently a deliberate plan to make as much of the job as possible.

He refused to go for less than a napoleon a day, which of course was simply ridiculous. We were commencing a long continuance of mule hiring, and what we began with, I knew would be handed on from one muleteer to another, and become a fixed precedent. The highest charge paid by the people of the country never exceeded—as I had carefully ascertained—6 francs the day's journey, for mule and muleteer. Guides are not needed, as every muleteer is or has been a smuggler, and knows every turn of the mountains and most remote valleys. Accordingly I offered, and had originally agreed at Aosta, to give 8 francs a day; considering the extra 2 francs a fair, though not on that account necessary, extra for a traveller to pay. To this I fully resolved to adhere, and leaving Glaissier to reflect a little—minus payment for what he had done already, to quicken his thoughts—we went in search of refreshment, and to see if there were any beds to be had, should we be obliged to stay the night.

The little cabaret, however, was merely a place of entertainment for the people of the Val, prettily situated among rambling vineyards; and in the wooden balcony, the two chasseurs, the report of whose rifles had startled E.'s mule, were discussing a bottle of wine after their morning's hunt. The only bed to be had was worse than the floor, and we decided on the hay-loft if we must stay. In the matter of food we were more fortunate, and in a short time, to our surprise, a capital repast was set on the table: pickled trout from the stream at Rovent, sausage, roast fowl, and a bottle of

good red wine, for which we were very modestly asked one franc each.

Glaissier lounged in to parley, and reduced his demand, first to 15 and then to 12 francs; but I was now still more firm, and leaving him we walked down to the "fonderie" to see the mode of smelting the ore; and also to call on M. Thomar, the Director of the mines. We found he had just returned from Aosta, and were kindly received by him and his pretty wife, a Parisian, whose delicate figure and polished manner seemed strangely in contrast with this wild glen, and the smoking furnaces and grim buildings; quite out of reach of all society, as there is no access to the place but by mule tracks. She, however, spoke brightly and cheeringly of their life and its interest; and their apartments bore the evidence of refined taste and genial occupations; a proof, if any were wanting, how much more depends on individual exertion than on locality, in conducing to happiness.

We saw through the works, and the different stages in the processes of reducing and roasting the ore, to its final issue from the furnace in bright ruddy masses of pure copper. The ore varies in richness, ranging from 20 up to as high as 85 per cent.; and is contained in the green gneiss abounding in quartz, which forms the mountain ranges of almost the entire district of the Val d'Ollomont. Some of the specimens of copper pyrites with quartz were very fine and pure. M. Thomar presented me with a series of crystals of iron pyrites, from the three-faced octahedron to cubes of unusual size, and also furnished me with an order to the subdirector at Ollomont, to see everything of interest at the mines.

We then returned to ascertain what chance we had of getting there, or of reaching the mountain châlets of By, where we had intended sleeping that night. A little more time, temper, and firmness, at last brought Glaissier to terms, and he agreed to be ready without more delay; signifying his acquiescence over a glass of wine, in a gruff laconic

"Bo'—" a corruption I suppose of "bon," and which seemed the conventional expression of assent or satisfaction in the Val Pellina, and often amused us.

At the village of Valpelline the valley diverges into two branches, the main one turning to the right up to Biona and the Col de Collon—the other to the left—the Val d'Ollomont—leading to the mines, and the pass of the Fenêtre de Chermontane. The last vines are seen here, their thick stems and festooned branches more picturesque than productive. The way to Ollomont rises rapidly behind the pretty village, and as we climbed it, we soon looked down upon the spire and walnut-shaded houses, from a considerable height, where the track ascends steeply by the side of a narrow gulley. The scenery of the glen to Ollomont is charming, the bright green herbage which clothes its rocky bed interspersed with groups of spruce, larch, and alpine alder. We met numbers of sledges or trucks full of ore, drawn by men and boys harnessed with ropes. Though the descent is rapid it seemed hard work on the rude rocky track, but nearly all the ore is thus brought down to the furnaces of Valpelline.

I had no time to stop at the mines, as we had not been able to start before 3, and were anxious to get on to the last châlets for the night—so as to be as near our next day's point as possible. But we saw the indication of the mines along the mountains on each side of Ollomont; marked by the heaps of bright and various-coloured rubbish brought out of their bowels.

Beyond Vaux, the next village, the scenery became wilder, the valley at last appearing a complete cul-de-sac; hemmed in with beetling crags of great grandeur, encircling the basin of verdant pastures, studded here and there with a few châlets. A beautiful cascade burst from the solid rocks, on the top of the cliffs to the westward, its foaming sheet branching into two, distinctly relieved against the now dark purple shade of that side of the valley; high above which were

visible the craggy battlements and rose-tinged snows of Mont Velan, and further to the north Mont Combin. Directly in front of us were the green heights, the "Alps" of La Balme, to which the somewhat steep ascent commences at the last "vacherie" on the plain—then closed, the cattle having all gone to the higher Alpine pastures. A little bridge crosses the foot of a charming cascade—though the volume of water is but small—pouring over the cliffs from the unseen glaciers of Mont Gelé. These cliffs are singularly varied in their colouring, the many shades of bright green-tinted rocks, apparently serpentine, heightened with orange and yellow lichens, and stained with deep black patches. From a projecting point on the steep slaty path, we had a splendid view commanding the whole valley, and the entire breadth of Mont Velan; its rugged spurs separating us from the Great St. Bernard. Passing through a tract of larches among broken rocks, we soon gained the extensive upper pastures, and saw to our right the châlets of La Balme; but keeping to the northward on the long undulating grassy mountain top, we made for the furthest châlets of By, which we reached at 7.

The shepherds who came out on our arrival were startled at the apparition, coming as we did in the dusk, and seemed excessively puzzled as to providing sleeping accommodation for "Madame;" but as soon as they found we should be perfectly happy and content with a shake-down of fresh hay, offered us a clean hayloft in which no one slept, and all was arranged without further difficulty. Offsaddling and bringing in our bags, we quickly made ourselves at home in the châlet—a squat hovel-like stone building externally; the interior a strange wild scene, dimly lighted by the glowing embers of crackling pine splints, heaped in a corner on the earthen floor, and above which swung the enormous copper cauldron seething with the day's milk. We were chilly enough to be glad to creep round the fire in spite of the blinding smoke; but there was neither stool nor seat of any kind, except the

one-legged milking-peg, as on the Montagne de la Saxe. A block of wood, however, was hunted up, and they good-naturedly brought it in for E., and placed it in a corner out of the smoke.

But for the pastoral nature of the articles lying about—chiefly a chaos of different vessels and utensils for milk—it looked like a smuggler's den or the head-quarters of banditti, the recesses of the building dimly revealing an indistinct and mysterious confusion of strange-looking chattels. The only beds were flattened heaps of hay laid on a few boards, above which were thrown in confusion all their articles of dress not in use, to serve the purpose of bedclothes. The low roof, decorated with cheeses hardening in the smoke, was well blackened; as, to economize the heat, they had no chimney nor any window, and consequently consumed their own smoke in a way not very pleasant at first to unaccustomed eyes and lungs. We took the side of the fire next the door, through which came in to our rescue the fresh evening air so peculiarly delightful on the high Alps.

The shepherds had now all come in, and were grouped round the vessel of polenta just ready for the evening meal. The glowing embers threw a ruddy light on their manly-looking faces, rough and unshaven, but clean as their hands, which they constantly wash; though the same cannot be said of their clothes, which were filthy as everything else, except the faultless bowls, spoons, and milk-vessels of all kinds.

From our saddle-bags we brought out candles, spoons, and forks, flask, and provisions; but they pressed us to join them at their hot mess of polenta, which was smoking in wooden bowls on a bench in one corner, lighted by a rude lamp, burning a thick wick in melted fat. We accordingly joined the rough-looking party, who, handing to us two clean bowls-full, with a couple of most formidably capacious wooden spoons, we made an excellent supper with the addition of sugar from our stores, and a little cognac from the flask as a corrective.

As a rule we always avoided curds, whey, or milk in any form —except new, when it is refreshing and wholesome—as we had experienced the ill effects of it more than once. "Polenta," which is a porridge of maize meal and milk—though very tempting to a hungry appetite, with only hard black bread and a slice of sausage in the haversack—yet is no exception; even the mountaineers, who are accustomed to live on it, affirming that it is the worst food to undertake any exertion upon, and they will only take it on such occasions when nothing better is to be had.

These simple-minded shepherds showed in their plain way an unpretending but most sincere hospitality. We were entirely at their tender mercy, far away from any habitation, some 3000 or 4000 feet above the valley, and without any ally but our surly guide, an old smuggler himself—as, indeed, all the shepherds avowedly are, more or less. Yet, had we been long known to them, we could not have been more frankly received and welcomed. Our arrival—though an event, and the first time, as they told us, that a lady had stayed the night there—was taken as if we had been expected, and not a shadow of intrusiveness or ill-bred curiosity manifested as to our object or proceedings.

Supper finished, pipes were lighted round, and, while the chief pâtre put the finishing touches to the day's cheeses, we chatted with them about châlet life and smuggling adventures. The latter they told with great zest, seeming rather to pride themselves on their contraband exploits than to regard them as criminal offences, heavy as the punishment is if detected. Most of the men are "contrebandiers," in early life, at least, on all these frontier valleys, as much perhaps from the love of adventure, in which the young men vie with each other, as from the temptation of the cheapness of articles free of duty in Switzerland, especially tobacco. The two together, at all events, are irresistible, and the wildest glacier passes are scaled by them in the thickest fogs, and even under cover of

night, to avoid the unhappy "préposés," whose dreary life is spent in the constant look out on the wild heights. We were told that if beaten in a fair chase or eluded, a rifle-ball was always the resource of the "préposé." Our guide, before he married, had been one of a regular band, and had many a time crossed the Fenêtre de Chermontane by night.

The life of the shepherds is too busy a one to allow time to feel the monotony or isolation of it, and the season of migration to the upper pastures is looked forward to as a joyous period. In the brightest months of the year—the protracted spring of the Alpine regions—the pastures, freed from the snow, are carpeted with rich flower-enamelled verdure, as grateful to the cattle after the hot valleys, where they are worried with the flies, as the fresh air and freedom are to the herdsmen themselves. At the Alps of By they said they arrived as soon after the feast of St. John (Midsummer-day) as practicable, and left about Michaelmas-day, to avoid the first winter storms. During these three months they are incessantly occupied, morning, noon, and night, cheese-making, milking, and driving the cattle to and from pasture. They go to bed at ten to rise at half-past two, when the cows are milked, and by the first dawn of day driven off to the mountains. The milk is boiled, curded, and pressed by the older hands; again at two P.M. they are once more milked, more cheese made, and the cattle stray about on the nearer pastures until nine, when they are brought up to the byres under the châlet, or sometimes tethered.

The Alps of By are among the most considerable we visited, pasturing 120 cows, beside those at La Balme. We saw about 115 cheeses finished and stored up, weighing about 80 lbs. each, beside a number of the smaller ones, called "fontines," which are for present use. Twelve or fourteen cheeses a week were made here on an average. In the winter the owners let out their surplus stock of cows, over and above what they have hay for, to persons in the plains, who have

the milk they give, in exchange for keeping them until the summer.

The cattle of the Alps, from their dependance on man in these wild regions and their adventurous life, display a sagacity and intelligence, as well as activity, in which the cows of the plains are utterly deficient. They will fearlessly venture along almost inaccessible ledges on the mountain sides, wherever a patch of green turf is to be found, and by tracks where hardly any one would venture a mule. Each one has its own name and answers to it, and they obey all the signals of horns and calls with the greatest regularity.

After supper the herdsmen went out to bring up the cattle for the night, and we strolled out for a short time before retiring to our hay bed. The full moon had risen above the heights of Mont Gelé behind us, and the scene was one of wild and gloomy grandeur. We seemed within an immense dusky crater, hemmed in at the head by great peaks of a deep ashy purple hue, the snowy mountain crests and cold glaciers of Mont Combin hanging above and gleaming in the moonshine with a pale spectral light. The only sign of life beyond our immediate vicinity was a lonely châlet, discernible on the opposite mountain, where a solitary light flickered. The wild Alpine cadences of the herdsmen bringing in their flocks, the bleating of the goats, and the tinkling of the cattle bells were soon hushed, and the only sounds were an avalanche at intervals and the distant growling murmur of the glacier torrents dashing down the rocks.

When we sought our quarters for the night, stumbling in the dark up a stony bank, we were led round the corner of a detached hovel, through a low doorway—to enter which I had to stoop double—into a little hayloft, where, by the dim lamp, one of the shepherds was shaking up the hay ready for our beds. After cautioning us against a dark chasm at the further end of the loft, he wished us "bon repos," showing me a wooden bar with which to secure the door, and then

lighting our candles we reconnoitred our quarters. The loft only occupied half the little hovel, the other part being a mysterious dark hole, with only a loose pole to fence it off. The darkness was impenetrable, but the peculiar odour of fresh-made goats' cheese unmistakeably proclaimed part, at least, of what it shrouded. The hay was sweet and dry, and we soon spread the plaids comfortably over it, put on our warm woollen jerseys, and covering ourselves up with another large warm plaid, homespun in the far distant island of Iona, we put out the lights carefully, for fear of the hay, and were soon fast asleep. Our slumbers were only disturbed by the clattering of goats, which at first startled us with their antics overhead—these restless animals never seeming to sleep, and keeping up an unwearying skirmishing all night round the hovel, or on the rough shingle roof.

When we woke in the morning the light was streaming through the crevices between the stones and shapeless slates, and unbarring the door, I found it was already nearly five. We washed and made a simple toilet with the help of a pocket mirror at a bubbling stream close at hand, refreshed by the bracing morning air after the close hayloft, and with much the same exhilaration as one feels on turning on deck in the early morning, after a hot night at sea.

The evening before I had set on the portable saucepan with rice, to stew all night by the embers, and now, fully swelled and with a little new milk and sugar, we made an excellent and supporting meal on it. Selecting what things we wanted for the day, and placing the rest of the baggage in the keeping of the herdsmen, we were ready to start. The wayward Glaissier, however, unexpectedly declared he would not take the mule, as it could not traverse the pass; and it was only after firmly insisting on it, with threats of M. le Syndic at Valpelline, and a positive refusal to pay him a franc unless he fulfilled his agreement, that the mule was at last forthcoming. I reproached him for his ungallant

endeavour to compel a lady to walk up an ascent which he himself had told us the night before was everything that was bad and difficult, and yet he had traversed a hundred times with "montures." He started at length very sulkily, we very merrily, gladdened by the promising sight of the cloudless sky, already suffused with the blushing tints of sunrise.

Taking a straight cut up the steep slopes, we continued for some time along a high grassy ridge, leaving a cross on some heights above us to the left. Beyond this point the scenery continually increased in wildness and grandeur: on our right the mass of Mont Gelé rose almost perpendicularly, like the face of a rift pyramid, its summit backed up behind by a continuation of the chain, a ridge of savage aiguilles stretching down to Valpelline. On a lofty cornice of this dark range overhung the glacier of La Balme, at a vast height above us, streaming down from behind Mont Gelé, and showing its gigantic mass laterally as it is crushed up against the base of the bold aiguilles which rise above it. Another small glacier shares part of the same shelf; and the spectacle presented by the two, backed up by the black craggy ridge behind, is one of the most singular glacier scenes I ever saw.

The tops of Mont Avril, to our right, were capped with rocks in most fantastic fashion, one recalling exactly the "Cobbler" on Loch Lomond. The head of the valley, a wild hurly-burly of huge blocks, was covered with a steep bed of snow and ice, above which we now saw the summit of the Fenêtre de Chermontane. Crossing a swollen stream, to which we descended some way, and which took me nearly to the middle, and then over melancholy beds of black, sodden alluvium, we wound up among a labyrinth of rocks, beautifully mottled with yellow, grey, and black lichens. Among these were some beautiful specimens of serpentine. We had several deep beds of snow to pass, and into one of them, which was hollowed underneath, the mule plunged

with E., and nearly met with a serious accident, fortunately resulting only in the temporary loss of the pendent bag of books from off the saddle, but which we recovered after some digging in the snow.

On the flank of Mont Gelé an enormous accumulation of disrupted fragments lay piled up as they had fallen from the splintered crags above. On this rested a miniature glacier, the melted ice trickling into a little basin or lake at the foot of a wall of snow about 30 feet high. The little lake had no visible outlet, a small moraine barring it in; and its motionless blue-green waters, in which little icebergs were floating, had a singularly lone and mournful aspect. Mont Gelé, seen from this point, is wonderfully grand; and few of the minor peaks of the Pennine range can compare with its unique and stately form.

At nine o'clock we surmounted the snow-slopes—which that season were unusually difficult for the mule—and stood on the summit of the pass, a narrow ridge of the barest slaty rubbish, marked by a wooden cross. The height of this Col—the Fenêtre de Chermontane according to M. Studer, is 9213 feet. The ruins of an old hut, formerly used by the préposés, stands near it; and on reaching it, Glaissier, for the first time, relaxed into a grim smile as he pointed it out with glee, as if in exultation over his old enemies.

We were no less delighted, though for very different reasons; for we had at last attained the point at which we had so long aimed. We had a cloudless sky above us, and our past disappointment was more than compensated by the present enjoyment of the splendid scene. For our satisfaction, the reports of the quantity of snow we had heard of at Orsières were now fully confirmed, as far as the passage of mules was concerned, the cattle having only passed the glacier below, three or four days before.

The upper part of this arm of the Chermontane glacier, which reached to our feet, is a wide expanse of pure snow,

deeply mantling the névé or ice, only marked by a few thread-like moraines from under the base of Mont Gelé, the face of which is so sheer a descent from its cleft summit, that the snow only adheres in frosted sheets, scored with the parallel furrows made by falling fragments from above. It appears absolutely perpendicular, though, as Forbes states, the angle of inclination is about 55°. It seemed at first singular that, though this Col runs nearly in the same direction as the Col de la Seigne, yet the fall of the water on either side is here exactly reversed, that from the south-west finding its way down by the Po to the Adriatic, that from the north-east to the Rhone and Gulf of Lyons.

But it was evident that the finest view of the glacier was to be had below the Col, some little way down the Valaisan side; and descending, after a short halt—E. on foot, and the mule following—we took along a wild track on the side of Mont Avril, over beds of snow, among fragments of rock. The August sun was rapidly uncovering scattered patches and mounds of decomposed shale, with a scanty vegetation, chiefly lichens and mosses. Here and there, however, the lovely blue gentians and pink *Saxifraga oppositifolia* flourished bravely in hundreds, seeming to emerge from their snow covering ready expanded. There were but few other dwarfed flowers; and as we descended the black stony soil was soaked with trickling snow-streams, pouring down from all sides, as if the mountain itself were melting

We were now in front of the whole of the enormous ice-streams of the Chermontane glaciers; and, after trying up and down a series of little rocky hills in search of a good resting-place, we at last chose a grassy shelf just under the shelter of a jutting rock, facing the warm sun, and commanding the most perfect view of this magnificent scene.

Our position was so far advanced that, looking over the narrow ledge, there was nothing apparently below us but a tremendous gulf of unseen depth, on the other side of which,

in full front, the great glacier breaks off in a huge precipice of vertically-rifted ice. Three subordinate arms, each a noble glacier in itself, poured their converging streams into this chasm, beside the one from the right, which we had skirted all the way down from the Col, stretching far under the dark snow-streaked crags running down from Mont Gelé.

Round from behind this mountain appears another stream of glacier, descending from a crest, by which is a passage into the Val Pellina above Chantre, called the Crête Sèche, not seen, however, from here. The central branch, flowing down in a graceful curve, issues from a gorge between a mountain—crowned with a singular horn of pure snowy whiteness, shooting up in solitary majesty—and the opposite side of the Trumma de Bouc. Both these glaciers are joined by a third great arm, flowing between the Trumma and Ottema peaks. All these dazzling glaciers, glittering in the bright sun, swept down like calm, winding ice rivers, the various branches all uniting smoothly, and consolidating firmly and compactly at their lateral junctions, their moraines joining in the centre in gracefully-curved lines, the surface little crevassed, except just at the bases of the Ottema and Trumma de Bouc, round which it is tossed into icebergs, and deeply rifted.

Suddenly the wide stream, like a broad river, broke abruptly off over the edge of a precipice in front of us, rifted with vertical crevices, so as to complete the resemblance to a wide sheet of falling water frozen at the instant. The gigantic blue ice-waves rolled down into the deep valley below, joined by the sea of snow-mantled glacier from Mont Gelé. At a vast depth the now-united glaciers filled the bottom of the valley, stretching so far beneath us that I required my telescope to examine its surface and structure.

At the foot of the upper glacier, on the further side, near the edge of the precipice, lay a strange little blue tarn or pool; and another appeared lower down, like a dark mirror,

among a little group of rounded conical hills, covered with olive-green herbage, on which I discovered, with the glass, a flock of goats, like little specks, though how they got there seemed inexplicable. Behind the mountain of Ottema, above this, and up the third arm of the glacier just described, Glaissier asserted was a pass with which he was acquainted, leading over the glacier of Arolla to Evolena, in the Val d'Erin, as conjectured by Forbes.

Again, beyond the little tarn and pastures of Chamrion, blocks and pyramids of ice protruded above the edges of two steep ravines, down which they poured headlong—showing the glaciers of La Brena and Pleureur, divided by a pointed mountain. The glacier of Gétroz was not visible, being further down the savage Val de Bagnes, which even in the summer sunshine was of a gloomy inky hue, its wild dreary length unbroken—as far as the eye could reach—by a single tree: and shut in by long bleak ridges of sterile mountain.

From the north end of our little ledge we had a noble view of Mont Combin, from its very top, sheeted with glaciers. That of Durand streams down into the Val de Bagnes, and strides right across the bottom of the valley, in a comparatively smooth mass; only arrested in its impetuous course by the opposing rocks of the solid mountain base, against which it uprears itself. The foot of the glacier of Chermontane does not extend as far as that of Durand, but the torrent of the Drance, running from it, has kept a passage for itself right through the glacier of Durand, under which it burrows, by a cavern like that of the Doire under the Brenva glacier.

Perched on our grassy ledge in the midst of this magnificent rendezvous of glaciers, we passed a long summer's morning. The heat of the sun's rays was intense, though we were surrounded by an eternal winter of snow and ice—and the utter silence—unbroken by a breath of wind, an avalanche, or an ice crack—was almost palpable. Black bread broken

into fragments with the hammer, and a slice or two of sausage, sufficed us for dinner, with however a flask of light wine which had been plunged in the snow behind the rock, on our first arrival, and the cool purple juice of the vines of Aosta made amends for scanty fare.

At length, after I had completed a sketch of the glaciers while E. hunted for plants, it was necessary to commence our return, so as to reach Valpelline before dark. On reascending to the Col we chose a new route, lower down the side of Mont Avril, and up a broad bed of snow close under the lateral moraine of the glacier—which rose above us to a height of some 100 feet. Leaving E., I climbed up this moraine, over the loose rocks and soil, on the slippery ice, to get a better view of the upper glacier; continuing along the top, which was but partially crevassed and covered with snow. After some distance the upper portion became so deeply covered, that I thought E. might safely traverse it with the mule, and at a favourable point, where the flank was less steeply inclined, descended to bring her up. We had, however, hardly got half way up, when a loud sudden crack was followed by a tremendous ripping, crashing roar, loud as thunder, which shook the ice under our feet. Hurrying upwards we were just in time to see a crevasse open, a few feet behind us, running rapidly to right and left for some hundreds of yards; and the ice-field we had just been traversing settled into an inclined position, with a slow undulating heave. A moment later and E. would have been cut off, as the mule could not possibly have crossed the now yawning crevasse. The glacier was probably considerably hollowed underneath, at this outer part, by the radiation from the earth, and our united weight and steps had hastened its giving way. It is remarkable how rarely one sees the actual formation of a crevasse of any size, an operation which seems in general to be accomplished gradually, and with little more than a hollow crackling sound. We were glad

to have the opportunity of witnessing the occurrence; and the noise of the tearing asunder of the great body of ice above and below us, and the appearance of the large mass heeling slowly over, were both grand and startling. Without further danger we traversed the long snowy ascent of the glacier, taking it about the middle, and reached the Col again.

In the mid-day sun the tints of the surrounding scene were all changed, and toned down to a softer character. The hard, stern shades of the early morning had vanished. Mont Gelé and its attendant peaks were of a pale lilac grey, beautifully shaded with blue—the strange little lake, at the foot of the snow slope, was of a brilliant opaque green; and further down to the west—among the variously tinted rocks and hills of olive-green herbage, apparently overhanging the Val Pellina—were two other little lakes, reflecting the deep azure sky overhead. The glaciers of La Balme, dark and frowning in the morning, were now gloriously lighted up and with wonderful effect; the dazzling ice-cliff on the northern face exhibiting a cold semi-transparence, like the purest porcelain relieved with delicate blue veins. After a last look at the noble peaks and glaciers of Chermontane we retraced our steps down the Col.

While the mule made a détour, I took a glissade down the steep snow slope, narrowly escaping a plunge at the bottom into the little lake—when we halted for some time, so fascinated were we with its singular and wild aspect. We followed a different course on the descent, winding among a maze of rocks, and under one of immense size found a beautiful little spring gushing out of the rock, and deliciously cold after the glare and heat of the sun. The emerald-green grass which fringed it was a complete bed of bright blue-eyed forget-me-nots (*Myosotis Alpestris*) and pink saxifrage.

With the true smuggler's instinct, Glaissier was constantly

on the look out for the préposés, apparently his only amusement; and not far from the cross we had passed in the morning, he discovered and pointed out two of them peering over a rock. Taking out my telescope I encountered the object-glass of theirs directed on us; both parties were however, I suppose, equally satisfied, as after coming within easy range of the rifles slung on their backs, they let us pass without further challenge. E. had found the mule so awkward in descending the rapid slopes, that she had dismounted from the Col, and we made some wide botanical diversions before we once more reached the châlets of By, which really had somewhat a feeling of home after the wild Col.

After packing our bags and drinking a bowl of fresh milk, we were ready to start again, but Glaissier lingered behind with every possible excuse, and at last bluntly told me I had not paid the shepherds. Having seen his object for some time, I as curtly answered, "Ce n'est pas votre affaire," and continued sketching, telling him I should follow when I had done; when he had no alternative but to proceed, balked of his intended share. The shepherds at first would hardly accept any remuneration for their simple but hearty hospitality, and shaking hands with them, I rejoined the others, as they were descending into the Val Pellina. We had left our bags in the care of the shepherds, containing many valuable articles, and all our money—only secured by a strap, the lock being broken—but we had perfect confidence in their security, and found them untouched.

We rested a little at the bridge at the foot of the picturesque waterfall, and then dropped quickly down to Ollomont, where we went to search for the subdirector of the mines. He had gone to Aosta, and therefore, after a general survey of the works, we continued on our way to Valpelline, reaching it in three hours from the châlets of By, including frequent stoppages.

We had anticipated a bed on the floor, or in the hayloft

of the little cabaret, where we had put up before, but on our arrival there we found a lady waiting to offer us the best accommodation and entertainment her house afforded. At first we were at a loss to imagine to whom we were indebted for such unexpected kindness, especially after the accounts we had heard of the inhospitable character of the people of this Val; but to our pleasure it proved to be Madame Ansermin, to whom we had an introduction, and who with her husband had just returned from Aosta—their absence having prevented our seeing them the day before. Of their hearty unaffected hospitality we cannot speak too gratefully; everything in their power was done to make us comfortable, and, dusty and travelworn as we were, the appliances of a civilized toilet were luxuries, after our hayloft, and al fresco ablutions, at By.

Our plans were discussed before retiring to rest, as our intention was to ascend the other branch of the Val Pellina, to Biona and Prerayen; and after exploring it, to cross, if practicable, over the mountains into the Val Tournanche or the Val St. Barthélemy. Several persons acquainted with the mountains were sent for, and consulted; but though we learnt that there were two or three passes over into the Val St. Barthélemy, known to the chasseurs, yet there was not one accessible to mules. Of the pass over into the Val Tournanche no one seemed to know anything practically, except that one did exist, and so difficult, that to get even our light baggage carried over it would be out of the question. One available point only along the ridge was suggested, called the Col de Vessoney, at the extremity of a side valley from Oyace, to within a short distance of the summit of which mules might reach. But from a point just beyond a remote Alp—where a few summer châlets might afford shelter in case of necessity—everything must be carried on the shoulders over the abrupt crest of the Col, and down to St. Barthélemy. The great difficulty was to get any of

these independent and not very accommodating mountaineers to undertake the expedition. But this matter our kind friends requested us to leave to them to arrange, which we were only too glad to do, and retired early to rest.

Next morning we found a guide ready provided—who presented himself as we sat down to a plentiful breakfast, and undertook to cross the Col with us, and carry the bags over. Some difficulty had been experienced in procuring a "monture"—as they invariably styled a mule in these valleys—all being busy at the hay harvest; but the interest of our friends had succeeded in obtaining for E. an excellent animal, the property of the Syndic as we found, and which we had as a special favour. Our guide, Joseph Barailler, a native of the valley, was an old soldier, one of nine brothers, who had all followed the same profession—and he was highly recommended to us by M. Ansermin, who told us we might place implicit confidence in him. This character he fully bore out, and proved a most faithful, goodhumoured, and enterprising guide, though the first time he had served in that capacity—travellers being as yet almost unknown in the Val Pellina.

Before starting, I paid a visit to a well-stocked apiary in the garden, one of the great attractions of their country quarters to Madame Ansermin, who took great interest in bees, and, with her husband, passed several months every summer here—to enjoy the fresh mountain air at the season when Aosta is the hottest. I was initiated into the Valpelline management of them, which is not greatly different from the Scotch mode, where also the chief honey harvest is on the moors in autumn.

The saddle adjusted to its new fit on the sleek mule, and our baggage once more arranged, we bade our most hospitable entertainers farewell, and shall long gratefully remember their hearty kindness and pleasant society; the more welcome as it was so unexpected in this isolated val-

ley. Professor Forbes has paid a graceful tribute for similar hospitality shown to himself, and we had the pleasure of gratifying them by translating his chapter on the Val Pellina.

Our intention was to go no further that day than Biona, remaining there the Sunday, after which we determined to try the passage to St. Barthélemy over the Col de Vessoney. From Valpelline our way lay through a very romantic valley, beautifully shaded with thick trees, interspersed with a profusion of barberries loaded with scarlet fruit, wild gooseberries, and raspberries. The road ran close under the mountain side and facing the south; and the heat was intense, producing an Italian atmosphere, and among the wild blocks of gneiss bordering the track, the merry lizards were as numerous as in the lanes about Rome. The stream of the Buthier was full of logs of wood, drifting down from the upper valley to supply the furnaces at Valpelline, to the grievous destruction of the forests, which are fast disappearing. We met strings of mules, and even women and girls, laden with bags of charcoal for the same purpose. At the Pont du Préli is the division between the Val Pellina proper and the upper Val. Near it we remarked a little cross, close to a large stone, which our guide Barailler told us was erected to record the death of a nephew of his, three years old, who had gone down to the river to drink and was precipitated into the stream. The little mortuary crosses by the wayside in these valleys, marking the spots where deaths from various catastrophes have happened, are in some places extremely numerous, and very remarkable and significant to a stranger.

On a lofty crag of syenitic rock, bridging almost entirely across the valley, seeming to wall us in, was perched the tower of Oyace, the cliffs studded with scattered pines above, and at their feet a little picturesque group of châlets, half-buried in large walnut and other trees. It was a beautiful

subject for a sketch, and the rock in itself is interesting in a geological point of view, as mentioned by Forbes,* from the remarkable confusion of the true syenitic with the gneiss or metamorphic rocks of the valley. We ascended it to the left, passing a little chapel near the top, one of the last of the innumerable little oratories decorated with frescoes which abound in these Vals. Each of them has the figures of two saints, painted in bright colours, and often not badly executed; the favourites in the Val Pellina being St. Michael and St. Grat—St. Barbara and St. Dion—and St. Bernard and St. Ambrose.

Between two summits on the opposite side of the valley appeared the peak of Mont Verdona or Faroma—which of them I could not ascertain exactly—sprinkled with snow, and by this point we were informed was one of the tracks over into the Val St. Barthélemy. Near Chantre is a large stone, with which is connected one of those universal traditions of a great serpent, once on a time the terror of all the neighbourhood, whose achievements consisted in sallying forth and devouring all passers by. Another more probable tradition refers to a large glacier said once to have descended from the mountains above—called the Crête Sèche, part of the range of Mont Gelé—and there was strong confirmation of it in the mass of rocks, stones, and bare rubbish, which extends across and below the road, continuously with a vast moraine-like heap high up the mountain side, and now sprinkled with pines. The accounts of the former existence and disappearance of this glacier were repeatedly confirmed afterwards, and so circumstantially that I have no doubt of the fact, remarkable as the retreat of the ice is, not a particle of it being now visible above the crest, on the other side of which is the glacier of Chermontane.

Beyond this was another similar opening, between two

* Travels through the Alps, p. 275.

peaks, with the apparent moraine of another ancient glacier, and by this is the pass of the Crête Sèche over to the Glacier of Chermontane, frequently traversed by the inhabitants as the nearest route to Bagnes. We heard of a party, of whom our present guide was one, who had passed it the week before on a smuggling expedition for tobacco. The glacier part of the pass is short; the remainder occupies six hours, and—considering the splendid view it must afford of the very heart of the glaciers of Chermontane—must be a noble pass; and we regretted we had not known of it in time to have attempted our passage this way over from the Col de Chermontane.

Passing a little boundary-stone the district of Biona commences, the Val now taking that name. The frescoed chapels ceased, and we noticed a striking change in the physiognomy of the people, who were fresher looking, with a somewhat German cast of countenance. The women were comely and robust; their mode of dressing the hair also was remarkable, it being parted an inch deep all round the forehead, the lower part curled in short ringlets, and hanging like a fringe over the face; the back hair turned up and confined under a sort of skull-cap.

The scenery to Biona, from the great height of the track, is very romantic. At a promontory-like projection above the deep valley I found the remains of a shaft formerly worked for copper, evidenced by the red-coloured rubbish, like that at Ollomont, in which were fragments of copper pyrites. At the bottom of the deep precipice, below, is the mouth of an old mine worked by an adit, which had been long abandoned. That year, in consequence of the excitement of the revived mania for mining, it had been again explored, but without much encouragement; report said it was to be worked again.

We depended for our night's entertainment on the curé at Biona, who, we knew, had been apprized of our intended

visit by our good friends at Valpelline; but when we arrived at the gaunt stone building, with high narrow windows, which Barailler informed us was his abode, we found it closed, and no one visible. Meanwhile, we unpacked the mule, and, depositing the saddle-bags and saddle in an outhouse, went with Barailler to each of the few houses of Biona in turn, which we found entirely deserted and silent as death. There was nothing for it but to wait, and hearing from Barailler of a recently-discovered mineral spring we set off to visit it. A short walk through green meadows, newly mown, led us to a high brow overlooking the river-bed and low meadows, and from the face of this it issues at some height out of a hole in the rock, where Barailler asserted he had heard there was a considerable cave after entering "stomach deep" in the water. It can only be seen here from a narrow ledge on the edge of the precipice, so I was unable to reach it. While sitting on this point, enjoying the views of the Val, we spied out the curé, in his black cassock and cap, down in the meadows at a distance, busily occupied in irrigating them. Barailler, however, advised us for some unexplained reason not to go to him, and a messenger came down to tell us that our arrival was known, and the curé's housekeeper returned, so we remounted to the house.

It proved that we had been expected and preparations made for us, and a very civil and attentive old woman busied herself in getting supper ready, while I went out and sketched. We were summoned before long, and found soupe-maigre, omelette, peas stewed in their pods, spinach, and a bowl of "œufs à la reine," as the old housekeeper facetiously called them, with light red wine—fare we had little anticipated. The dimly lighted room was primitive enough in its simplicity—carpetless of course, the furniture merely a deal table and benches, and in the narrow window-sills a few well-worn books, an old inkstand, and an ancient pen or two. The curé himself did not appear at all,

and Barailler was very mysterious on the subject, hinting that he was keeping out of the way of certain carabiniers who had been in search of him, on account of some papers implicating him politically with the government; but, whether this was true or not, he never appeared, though he knew of our arrival.

Barailler left us after we had made arrangements with him for the following Monday, when we intended to try the passage over into the Val St. Barthélemy by the Col de Vessoney. His nephew, Charlet Biona, a youth of about twenty, was very anxious to volunteer his services, and we agreed he should accompany us, he undertaking to help to carry our bags over the Col, which on all hands was represented as being excessively steep and arduous at the summit. Our engagement for Barailler as guide and with a mule was at eight francs a day, without any difficulty whatever—a price we never afterwards varied from the baggage to be carried by the mule or otherwise. Now we had once stood firm, we should have had no difficulty in getting as many mules and guides as we liked at the same price—the owners only too glad to let them. In fact, I have no hesitation in saying, that the ill-judged extravagance of many English travellers—either from indolence, false shame, or mistaken generosity—has done as much to demoralize the natives of some of these valleys, as it has in burdening those who come after them. Barailler himself very quickly won our goodwill by his smart, soldier-like manner, his ever-ready care of and attention to E., and his very amusing stories of his adventures and experiences, which greatly diverted us, his fate having apparently favoured him through life with a series of the most perverse and unhappy masters and mistresses imaginable.

After the sultry day we walked out by moonlight, enjoying the calm evening; the moon was just appearing above the mountain crest, while in the distant west constant

flashes of brilliant greenish lightning from a dark pile of clouds flickered for an instant along the pinnacled slopes facing us. On coming in late we were met by the curé, who received us kindly, and showed us to our dormitory.

My thermometer in our room did not fall below 72° during the night; an unusual degree of heat here, where the temperature is generally so very cold. Their enjoyment of summer is but short-lived, and in a month, the curé said, they might expect snow: the sun is barely visible above the wall-like crest of the opposite mountain range before noon-time, in the winter; disappearing at four at latest even in the summer. Nevertheless Biona, though 2265 feet above the level of Valpelline, enjoys a much warmer climate than the latter, which is so closely shut in, that the sun never reaches it in winter, and the snow is permanent.

We found excellent beds of fresh maize-leaves, and, though we were at an altitude of 5315 feet, slept with the windows wide open. Fitful gleams of lightning every now and then paled the moonlight—while the streamlets below murmured with a soothing sound—and the troops of charcoal-burners, who kept passing under our windows until a late hour at night, chanted in full harmony or joined in merry choruses; which floated up from the distance as they descended the valley.

Before the bell rang for early matins we were on our way up the valley, partly unwilling to scandalize the curé in the eyes of his flock, for entertaining heretics, who did not attend the church services; but rather as preferring our usual custom, where possible, of retiring on the Sunday to some "mountain apart," where we clashed with no one's religious feelings, nor they with ours. The retired pastures of Prerayen, at the head of the Val, were at a pleasant distance, about three hours' easy walk, and, taking a few hard eggs and bread with us, we set out for them alone at six o'clock. It was a calm cloudless Sunday morning, and even

at that early hour we met many peasants on their way down to mass at Biona. Amongst them was one in a red coat, of muscular build, whom, by a sort of instinct, I recognised, from Forbes's description, as his guide over the Col de Collon, "Biona" or "l'habit rouge;" which was really the case. He is also called "Miollat" for distinction, as there are so many of the name, and we remarked how many of the surnames in this district are taken from localities—as Créton, Charvensod, Biona, &c.

Beyond the village of Biona the scenery becomes wilder and is very fine; and the track is carried at a marvellous height above the bottom of the deep contracted valley, without any protection to the narrow pathway, which hangs immediately over the precipice. Numerous small crosses along this part of the route are a melancholy proof of the dangers and loss of life from avalanches, slips, and other accidents. Barailler subsequently pointed out to us on the highest and narrowest ledge—which he rightly styled an "endroit affreux"—a cross which goes by the name of the "croix de l'épousée." A young bride, on the afternoon of her wedding, was on her way to her new home, mounted on a mule, when the animal became restive, lost its footing on the crumbling edge, and, falling over backwards, both were precipitated with a fearful crash into the awful depth below. Though the date on the cross was 1818, the event was of a much earlier period, an older cross having been merely renewed at that time by the inhabitants, who attach a natural interest to the sad story.

A remarkable feature of this valley is, that, though the path is carried at such a height, there is no continuous view either up or down it, except from the long promontories which jut out continually; shutting it up into successive basins, with only an occasional peep here and there of the top of a glacier. At the next hamlet above Biona—a scattered group of dreary châlets called Pouillay—a peasant,

who like everybody else in the Val seemed to have heard of our arrival and movements, as something remarkable, good-naturedly came up and pointed out one of the passes we were interested in, which crosses from Montagnaia to Proteré or "Notre Dame de la Neige," in the Val St. Barthélemy. There are two routes, but both he described as mere chasseurs' tracks, impracticable for mules. Near Lechère, the next châlets, we were delighted with the novel refreshing appearance of a dense clothing of deciduous trees, apparently the *Alnus viridis*, on the opposite bank. From Lechère the valley is flat, and the track leaves the heights, continuing along the river bank.

Near a little pool on the uneven plain—in which a few tadpoles, only just vivified, gave one a dreary idea of frog life in the Alps—was a semicircular hollow, the scene of a bloody encounter, in the days of bows and arrows, between the Bionaise and the Swiss; in which the latter were beaten and driven over the glaciers of the Col de Collon back into the Valais. To this day it goes by the name of the "Champ des Bonmorts" in the Val de Biona, and the Champ des Malmorts in the Valais; and looking at the wild scene, and knowing the dangers and difficulties of the glacier pass of the Collon, one could not but wonder at the pluck and daring which led the Swiss here on such an adventure.

Part of our way lay up the wide dry bed of the river, covered with pebbles and boulders, among which were pretty islets of verdure shadowed with larches hung with lichens of a bright sulphur yellow; while the alabaster-like mass of a noble glacier grandly filled up the head of the Val. Passing the little huts of "Vacheresse" across undulating meadows, and then keeping to the left under the rocks, we shortly arrived at the emerald green pastures of Prerayen, lying embosomed in a little hollow among the wild mountains, which closed in on every side. In the centre was the tiny chapel of La Maddalena, the last in the Val, and of most

diminutive proportions. We constantly remarked how every distant group of châlets, however small, has its chapel, whither the priests come for services at stated times, often from a great distance, and in bad weather at no small risk. Prerayen formerly belonged to the Jesuits of Aosta, but since their recent expulsion had passed into the hands of the Commissioners of the Ecclesiastical Fund. The châlets of Prerayen stood at the further end of this verdant basin, under two large rocky knolls rising in the centre of it. One of these we mounted—the top of which was crowned by a large and conspicuous wooden cross—and at its foot we seated ourselves on the dry herbage, and, after resting, read the services of the day.

We arrived early in the morning, and left as late in the afternoon as we could, not caring to make any diversion from our position, but reading, or gazing in turns on the perfect view of the whole encircling mountains, unobscured by a single cloud. To the north-east a vast spotless glacier, deeply broken in front into crevassed ice cliffs, overhung the head of the Val. Two branches, descending from the great chain, pour into a gorge, terminating abruptly in a wall of ice apparently perpendicular, though the whole height of it was concealed from our view by a rock crowned with larches. We scanned its dazzling pathless wastes with the telescope, endeavouring to trace out a possible route up its apparently inaccessible face. Two minor glaciers lay to the right, the nearest hanging on to a steeply inclined rock, said by the shepherds of Prerayen to abound in minerals, and gold even was stated to be found underneath it, if it could be got at!

The peaked and partly snow-crested mountains to the east and south divided us from the head of the Val Tournanche. There is a pass over into it by which Breuil may be reached, but steep and difficult, and no one with whom we conversed seemed to know it personally. There are two routes from Prerayen, one under Mont Cornière, taking I was told two

hours to the summit, and three to the other side—the other one takes to the right up the glacier, and is not so difficult. Above the pass a beautiful pyramid of snow, called also Mont Gelé, rises from the dark ridge, and an outlying peak is crowned by a singular mass of rock like an immense tower. I believe I afterwards identified this—from the other side, when in the Val Tournanche—as the Château des Dames—I could only make out a small cairn on the top, though there is said to be a cross also. The intersecting spurs of the two opposite sides of the valley closed in the south-west, over which was a distant view of snow Alps. To the west and north the summits of Mont Gelé above the Chermontane glaciers are shut out by flanking ranges.

A little below Prerayen a narrow opening, between Mont Chambert and Mont Vannet, leads to the Pass of the Col de Collon, and to Evolena in the Val d'Erin by the glaciers; a wild and dangerous pass in bad weather. It is often attended with great risk from the vastness of the glacier and its many ramifications, in spite of which, however, it is frequently traversed by the "contrebandiers." Forbes, who passed it in 1842, thrillingly describes his finding a half-thawed body, lost the previous year, and the remains of two or three others, under the lonely precipices of Mont Collon. The year previous to our visit, a Vaudois gentleman—Professor Chatilant—had persisted in spite of all warnings, like the hero of 'Excelsior'—in climbing the pass from Prerayen without a guide, and was never heard of again. His brother on receiving the intelligence came over and instituted a search for the body, but in vain—nor did the guides, who were employed and stimulated by liberal payment, and promises of further reward, find any traces of him, though they continued the search for many days. He was supposed to have been lost in a sudden storm. The corpse of an Englishman also was found the same year, as Barailler told me, without purse or watch, and supposed to have been murdered

by smugglers. But it was more probable that his body had been found and rifled by persons who would not mention having seen it, for fear of detection.

The day was most magnificent, a continuation of the unexampled fine weather we had enjoyed; but the heat was intense, and we were not sorry when Barailler unexpectedly appeared in the afternoon, bringing with him a flask of wine sent by the curé of Biona, and which he had thoughtfully stopped to ice in the gelid glacier torrent. Towards evening a heavy thunderstorm swept over Mont Gelé, and cooled the air, just catching us for a few moments, almost the only rain we had for an unrivalled duration of the most splendid weather ever known in these Alps. We took refuge in the châlets of Prerayen, which we found much more civilized than those of By, and with a very comfortable hayloft for sleeping in. In a large milk caldron was a fine tame marmot, the shepherd's pet. The cheese-room, a cool spacious vault, partly underground and nearly dark, was well stored with cheeses in rows—and on one shelf were a number of great globes of butter from goats' milk, raised on stumpy stalks also of butter, and resembling Brobdignag button mushrooms. I noticed that the coarse grey salt for the cheese was ground in a primitive quern, of genuine Celtic pattern.

Seventy cows and a flock of sixty goats are pastured here. We remarked the rarity of sheep on these Alps generally. In the Val Pellina but one flock of about a score was seen by us; black and white, and oddly mottled, and of a coarse breed. They are awkward animals to manage in the high Alps, where only they thrive best, and are chiefly valuable for their flesh and wool, being rarely milked anywhere—except in the case of the Bergamesque sheep, immense flocks of which are pastured in the Alps of the Grisons. The goat is a much more intelligent and tractable animal, attaching itself to man with great fearlessness and audacity, a handful of salt being sufficient to cement a permanent and not very

agreeable friendship. But the chief reason of their being preferred to sheep is on account of the milk, butter, and cheese, which they yield in some quantity. The butter at Prerayen was made chiefly of goats' milk—and though at first, when unused to it, it has a strong and somewhat unpleasant flavour, yet one soon becomes reconciled to it. As much, certainly, cannot be said of the cheese, which is excessively rank and "goaty," though on this account the natives seem especially to prefer it. If made carefully, it is, certainly, much better, and even palatable. The flesh of the kid is seldom eaten, at least we only met with it once or twice. That of the goat we never saw, though it is abundantly consumed and relished as genuine chamois in the great hotels on the north side of the Alps.

The shepherd whom we found in these châlets—a native of the Val d'Erin—had for many years come and returned every season, and generally alone, by the Col de Collon. He brought some specimens of copper pyrites from the neighbouring mountains, near the glacier above mentioned, which were of course, as usual, gold.

Barailler accompanied us now on our return to Biona, and gave us the benefit of his fund of local stories. Near the Champ des Bonmorts he pointed out a bed of snow—at the bottom of a cleft in the rock near the torrent—evidently the remains of spring avalanches. A proverb of the valley has it, that, when a person has seen this disappear three times in his life, it is high time he should die. Barailler's uncle had lived to seventy, and only seen it disappear twice.

The forests on these mountains are rapidly being destroyed, in consequence of the demand for wood for the copper-works below; and the consumption is uncontrolled by the influence of any large landowner, the territory being subdivided among a number of small "propriétaires," there being neither seigneur nor "locataire" now in the whole valley. The power of the wind is greatly increased, and much more

destructive, through the denudation of the mountains; and game, which used to be abundant, is now extremely rare.

At a romantic turn of the path Barailler pointed out to us, between the larches which clung to the steep precipice, and far beneath us, a new ladder planted on an apparently inaccessible face of the rock. He had himself placed it there some three weeks before, in company with some mining adventurers, and had discovered an ancient adit penetrating only a short distance into the rock, where, if they had not imposed on themselves, they met with promising signs of a vein of copper, and lead ore containing silver. Operations were, meanwhile, delayed until next season. It was necessary to receive all these accounts with ample qualification, as the whole country seemed mad on the subject of mining adventures. It was, however, in one way of some service to us, as my geologizing and specimen-collecting pursuits gave an intelligible object for our wanderings in many places where otherwise they would have been inexplicable to the natives. Even as it was, I often incurred no small censure for so cruelly dragging "la pauvre madame" over mountains and glaciers.

Among the plants in the upper part of the Val Biona were *P. calcareum*, extremely fine and abundant above Biona, large patches of luxuriant fronds covering the wayside tracts of rocky débris; and also *A. viride* and *C. fragilis*. At seven we reached Biona again, after three hours' easy walk from Prerayen. A good supper was prepared and waiting, and the curé joined us at last, kindly assisting in forming our plans for the next day's journey.

CHAPTER VIII.

VAL ST. BARTHÉLEMY.

Start from Biona — Gorge of Oyace — Ascent to châlets of Vessoney — Chamois hunters — Col de Vessoney — Last climb — Summit — Melting snow — Descent to St. Barthélemy — Lose the track — Overtaken by night — St. Barthélemy — Night at the curé's — Party of priests — Schools and education — Fenêtre de St. Barthélemy — Suspicious characters — Torgnon — Antey — Valtournanche.

By five o'clock on the 27th August we were ready to start, waiting only, as usual, for the "monture," which delayed us for some time, but at length arrived—a stout-built mule, which made it necessary to let out several reefs in the saddle-girths. The hospitable curé, Sunday past, was again "perdu," without any assigned cause, and we had to content ourselves with intrusting our hearty thanks to the good old house-keeper—whose care for E., and culinary efforts, had been equally praiseworthy. On such occasions we generally found a fair and moderate remuneration for attention, bed, and board, gratefully received; but rarely, if ever, as here, remonstrated against.

Descending the Val to Oyace we there left the road, skirting the great syenitic rocks on which the castle stands; and down by a steep track amongst forest trees, reached the bottom of a romantic gorge of singular beauty. A narrow stone bridge, with the date of 1688, crosses a deep, narrow rift or chasm, so profound that the eye could hardly penetrate its depth where the waters of the Buthier are pent up. Above the bridge is a lofty cleft in the high overhanging wall of rock, through which the torrent rushes into a dark boiling caldron, from which all sunlight is shut out by its

deep shaft-like sides; and as we stood on the bridge, the cool air, saturated with the fine spray, wafted past us with delicious freshness.

Here E. remounted her mule—which had gone some way round to avoid the steep descent—and we commenced the climb by an abrupt path up the rocks, which, with the fine larches growing on them, agreeably shaded us from the now powerful sun. On these rocks I found *Lycopodium Helveticum* for the first time on this side of the Alps; the dodder, too, was abundant; and delicious Alpine strawberries and raspberries grew in the greatest profusion. Reaching a clearing in the forest, we had our last view down on Biona. The road we had descended to Oyace seemed a long détour, but the valley is so contracted that there is no other route; and the pathway itself appeared like a mere line, scratched at an immense height along the face of an inaccessible precipice. Each slope we climbed in succession gave us increasingly grand and interesting views of the peaks and pass of the Crête Sèche, which we had wished to explore from Biona, but found it impracticable, on account of other plans and mule arrangements. On this side it presented no glacier climbing, nor any great difficulties

For some distance our way lay up a narrowing glen, through charming pine-forest — for great part of it on exquisitely soft and verdant turf, scattered here and there with moss-grown rocks, and carpeted with bilberry-bushes loaded with ripe blue-bloomed fruit of remarkable size. Delicious glades of the finest herbage were studded with flowers, and conspicuous amongst them was the noble blue columbine *Aquilegia Alpina*, and the tall spikes of the blue and also the white monkshood. Among the flowers flitted myriads of butterflies, Apollos, Fritillaries, lustrous coppers, and brilliant blue *Polyommati*. On the sunny side of the glen the perfume of the larches in the hot air was like that of cedar, while the cool shade under the shelter of the opposite

rocks, and the bright streams running through the mossy grass and tufts of ferns, gave the finishing touches to a woodland scene, the charm of which, combined with the massive purple ranges in rear, was indescribable. We lingered long to enjoy it, filling the vasculum and entomological boxes. Charlet had never seen insects captured before, and his amusement at my hand-net and its use was excessive; indeed, he laughed so immoderately, that at last the sober Barailler, who was himself astonished at my taking the trouble to catch such common things, felt in courtesy bound to check him.

The next stage in the ascent was a singular change. At the head of the steep dell we emerged on a wide, oblong sheet of rich greensward—apparently once a lake, now filled up with alluvial deposit, and intersected by a narrow stream, where a good crop of hay was being got in by the shepherds belonging to the summer châlets of Vessoney. Bare craggy heights on the left completely overhung this sequestered spot, and in front of us, to the southward, we now got a view of the sharp jagged ridge of lofty mountains, partly covered with snow, and stretching right across the valley, over which was our route, by the Col de Vessoney, into the Val St. Barthélemy. From the apparent steepness of the sharp crest it seemed almost inaccessible, and by one of the most rugged peaked rocks which crowned it, the point by which we were to cross was shown us. With the telescope I could discern nothing but the sharp slaty ridges, protruding like teeth from the all but perpendicular face of shingly "screes," patched with snow-fields, and appearing to afford no footing whatever. Between this and where we stood some considerable heights intervened, presenting a precipitous face to the glen, and these we had first to mount.

We halted while I took an outline sketch of the Col, and then left the green meadows of Vessoney, passing under a remarkably large block standing alone at the head of the little

plain like a Celtic monolith. Beyond this, from the shivered mountains high overhead, had been hurled down an enormous aggregation of blocks of all sizes, through which the mule had to thread its way, until we came to a forest of ancient larches of giant dimensions, filling up the head of the glen. I have never seen more magnificent groups of this tree, which, as ordinarily seen, gives so inadequate an idea of its grandeur and beauty when allowed to attain its full growth. One noble tree in especial, the patriarch of the forest, was of gigantic proportions, the furrows in the bark being more than a foot deep, and our little party halting under it seemed dwarfed to half their size. The top, however, was stag-headed, and scathed by the violent mountain storms, to which in its old age it had at last succumbed. The rotting trunks of many a noble wreck prostrated on the ground showed the wild fury with which they must be assailed by the winter winds. In the calm, soft, and sunny air there was something inexpressibly mournful in the decaying magnificence of these forest monarchs.

This forest was hemmed in by a wall of apparent precipice in front of us, but we found a scrambling way up the face by the dry bed of a winter cascade which pours down a narrow gully; easy enough on foot, but very steep and somewhat precarious footing for the mule, where a slip would have been serious. Each overhanging ledge, as we gained it, was like a stage from which we could measure the height of the old larches, the tips of whose outspreading branches often nearly touched us—until at last the precipice out-topped the loftiest, and we stood far above them on masses of table rock. Here the larch was succeeded by the *Pinus cembra*, or "arolla;" but even this hardiest of all the pines, which flourishes at the height of 9000 feet, seemed here so storm-beaten that it could hardly cling to the rocks, and a few hundred yards further the last solitary individual stood blasted and leafless.

The herbage which sprang from the rough surface was coarse and scanty, fit only for the hardy, hungry chamois, but at a little distance beyond, in a grassy hollow by a greenish pond, stood in the midst of this desolate situation a few dreary stone huts, the upper châlets of Vessoney, which are occupied for three months in the summer. From the opposite heights the breeze every now and then wafted to us the familiar and harmonious tinkling of some hundred cattle-bells, where a considerable herd was pasturing; and about the châlets were all the accustomed evidences of the eternal milk and cheese.

Barailler asked leave to halt here half an hour, and get a meal of polenta for Charlet and himself, to save the weight and trouble of carrying provisions to the summit of the Col, as the mule had shortly to be left. We soon heard the voices of merriment and recognition between them and the shepherds, and, giving them ample time both for eating and talking, we chose a seat on the rocks from which we could sweep the serrated ridges of the Col which overhung us for the best points of passage. All seemed much the same—steep and inaccessible, except at one point, where a large bed of sloping snow promised an escape, for part of the way, from the steep slippery bed of crumbled rock, which lay at as great an angle as the stones could possibly rest.

While scanning the rocks carefully I discovered two brown figures, at first hardly discernible from the crags down which they were scrambling, and evidently laden with something heavy. This I soon made out with the glass to be a chamois, its horns hooked through the sinews of the hind legs for convenience in carrying. Barailler now rejoined us, and we presently came up with the two men, who proved to be chasseurs of great renown, one in especial, Sismondi by name, whose exploits are chronicled by all the mountaineers of this district. His intelligent, manly face, and wiry rather than muscular frame, showed the daring, light-limbed crags-

man. His companion was of a different stamp, thickset and sinister looking, and kept dogged silence. Their dress—coarse brown home-spun and woven woollen, with stockings and shorts of the same, and leathern skull-cap—assimilated so well in colour with the rocks, that it was not easy to distinguish them at a distance. Each carried a double-grooved rifle slung across his shoulders, of the rudest and plainest make, and very short in the barrel, but the thick blood-stains which smeared their dress told of the good service they had done, and of many a chamois and marmot killed and brought down on their backs from the mountain heights.

After depositing the chamois at the châlets, they returned once more to the mountains, and, as our way lay together for some distance, I had a long chat with Sismondi, whom I found as simple and modest as he was intelligent. His whole life was spent in the chase, and there was not one of the craggy fastnesses around us which he had not scaled again and again in quest of chamois and marmot. I have rarely seen mountain rocks piled one on another in more fantastic contortions and wild confusion than the splintered peaks of Mont Faroma—the central point of the range—and I could not discover ledges enough for footing for a goat. Yet Sismondi pointed out many places on the pathless cliffs where he had met with perilous adventures in climbing down, with chamois on his back, and which seemed almost incredible, though they were told in the simple and convincing words of truth.

When the chamois and marmot season is over—which lasts from July to the end of November—they followed smaller game, such as hares, blackgame, foxes, &c., until the green herbage left by the melting snow afforded fresh food to bring the chamois into condition, after feeding all winter on the long-bearded lichens of the pine forests. He confessed, indeed, that, though chamois found a ready sale at Aosta,

there was but little profit after all the perils and hardships of the chase. But the passion for the excitement of the chamois-hunter's life is such that they could not endure the *ennui* of the valley and regular life. A modern writer (Ruskin), who speaks of what he has seen and felt, has well said, "the spirit of the hills is action, that of the lowlands repose," and every real mountaineer will feel the truth of this, and acknowledge the force of that strange charm which is constantly impelling to fresh adventure, and bracing the nerves to the most daring feats, rendering the monotony of life in the plains, by contrast, dull and oppressive.

The one chamois just brought in was the result of a long and arduous three days' hunt, but they had hardly deposited it when they were again off to another mountain range—without any very definite object beyond the excitement of being on the look-out for game, though they had no expectation of falling in with more chamois that day. My pocket telescope—a small but excellent one of West's—attracted their great admiration and envy, their only glass being of low power, and originally, no doubt, highly chromatic, but now it was dim enough, as the object glass was grievously starred by a fall which had nearly cost Sismondi his life. If I could have replaced it, I would willingly have given mine on the spot to Sismondi, to whom it would have been an invaluable acquisition.

Half an hour above the châlets—which we now looked down on as tiny cabins—the ascent became so steep and the track so narrow that—with every wish on the part of Barailler to save E. the fatigue of climbing on foot—it was impossible for the mule to proceed further. She accordingly dismounted, and the mule was turned adrift to get back to Biona as luck might serve, should Barailler not return the same way. He and Charlet had now to shoulder the side-saddle and bags between them, while I relieved them of sundry articles, such as the herbarium, geological specimens, plaids

and shawl, besides the vasculum, and my shooting-coat, whose many pockets carried no small weight of multifarious articles.

We were much amused at the astonishment of the shepherds at the châlets of By, on the night of our arrival there, when I asked one of them to hold it for a moment; half dropping it at first with a "sacre," and handing it round to be felt, he inquired how I could possibly carry such a burden when mules were to be had. Many a time afterwards I had the same question put—and found the answer no better understood. The chamois hunter and the shepherds excepted, the main distinction here between those who are well or badly off consists in their being the fortunate possessors of a "monture," or compelled to go on foot, and looked down on as too poor to ride. The idea of choice in the matter, or any one walking for pleasure, is incomprehensible to them.

The chief difficulty of the ascent was now to come, though not of long duration, and a discussion ensued between Barailler, the two chasseurs, and myself, as to the best route to take to the summit. The chamois hunters advised the steepest line to the right as the most direct. I however chose the other, for the sake of our two men with their heavy loads, as well as for E. The remainder of the ascent reminded us more of the last pull up the cone of Vesuvius than anything else, only the soft ashes and cinders of the latter are easy and comfortable climbing in comparison with the clattering mass of shaly shingly débris which every few steps—as we plunged mid-leg deep into it—slipped bodily down with us on the steep incline, which seemed almost perpendicular. E. held on by me, and, after toiling up together for some time, we reached the snow-field I had marked from below. On taking to it we found it—though hard frozen, and excessively slippery from its great steepness—a great relief. In ordinary seasons it is, I believe, a mere patch.

Above this, the last part of the climb was a colossal pile of blocks of all sizes, one above another, in wild confusion, over and among which we clambered, like ants on lumps of sugar. At length we reached the summit of the Col an hour and a half after leaving the châlets, and Barailler and Charlet were not long after us—having chosen a more circuitous but less precipitous route.

The view which burst on us from the narrow ridge was more than a reward for all our toil, and different from any other scene we had yet witnessed. As we climbed up there was no time to look round, and now we found the mighty form of Mont Blanc, the Grande Jorasse, and others, had risen up behind us, above a long range of peaks to the westward, while the glittering heads of Mont Combin and Mont Velan, with the glaciers of Mont Gelé, and the Crête Sèche, closed up the view to the north, giving us a perfect panorama of the well-known outlines of many familiar acquaintances, in novel and unexpected combinations.

Turning southward to look on the other side of the narrow knife-like edge on which we rested, the contrast was as remarkable as if it were a different climate and country. To the north the scene behind us was cold, stern, and icy—but through the opening of the Col, framed in the high rocks on either side of us, range after range of southern Alps rose in endless waves—shutting out all view into the valleys, bare alike of snow or trees, and bathed in a soft haze of blue, purple, and olive tints. A little lake of vivid green hue lay immediately below us at the foot of a precipitous slope. To the north-east, and almost intercepted by the rugged pinnacles of Mont Faroma—the highest part of our ridge—towered a lofty mass of glacier fields of great extent, unfortunately overhung by heavy clouds, but revealing every now and then a lofty peak, which from its size and bearings we concluded to be Monte Rosa, or the Breithorn—if not the great Matterhorn itself.

Barailler and Charlet threw down their loads on the summit with unfeigned satisfaction, and, spreading our plaids on the rocks, we ate our hard eggs, sausage, and rye-bread, with as genuine an appetite. The bread, which the curé had assured us was baked the November before, was, as usual, dry and hard as stones; we had but a small quantity of wine—and water there was none at hand, so I prepared the apparatus for the double purpose of observing the boiling point for the altitude, and obtaining water from a long bed of snow which crested the summit—choosing a sheltered nook among the rocks.

E. meanwhile arranged the contents of the vasculum between the sheets of drying paper; Barailler and Charlet—who had had their polenta at the châlets—stretched themselves on the loose shingle in the hot sun, and were asleep in a few minutes. While melting the snow it became necessary to replenish the spirit lamp, when unfortunately the flask accidentally caught fire, causing an explosion which might have been worse, but, as it was, singed my eyebrows and hair, scorched the plaid, and unluckily broke the thermometer, the only one we had with us adapted to the purpose. Having decided originally on not bringing a barometer from the inconvenience and difficulty of transporting it safely, I thus lost the only means I had of ascertaining the altitude of the Col de Vessoney, and also of any future station—unless I went all the way down to Turin to replace it, which I subsequently did; but very imperfectly.

There was, however, one consolation, the snow was melted and gave a good supply of water—and to make the best of the mishap, I mixed it with the small portion of wine we had; added a judicious modicum of the spirits of wine, now no longer needed for the lamp; hunted up a lemon out of our stores, and with some lump sugar concocted a brew of punch which I thought very promising. E. had followed the example of the other sleepers, snugly ensconced in her plaid,

between two sheltered rocks, for the wind blew keenly; and as soon as it was necessary to start again, and I had made a sketch of the Mont Blanc range, I woke the party. After getting all our things together I handed round the silver cup full of the fluid, and it was pronounced delicious and most invigorating after the fatigues of the climb. The wonder of all, as to whence I had produced it, was unfeigned, and remained a profound mystery except to E., to whom I subsequently revealed it—and of course the secret was rigidly preserved out of regard for the spirits of wine.

Our guides made a cache of sundry articles of their own, which they intended to pick up on their return; and then shouldering the baggage once more, we commenced the descent, taking a short, steep cut straight down to the valley. The route was now so clear that I stayed to make another outline of the mountains on the Val Pellina side, and then E. and I took our way downwards.

The descent was very striking, the beautiful southern mountain ranges blending in every varying tint of ashy purple, amethyst, and rosy red, exquisitely soft and transparent for such bare ridges; and the Italian glow and warmth of colouring in the setting sun was the more enchanting in contrast with the dark, stern crags and snow-peaks of the other side. We dropped very rapidly down, and before long reached a group of summer châlets—with a little chapel in a basin of pastures—where we found and left our guides drinking whey. Having to find the way for ourselves, we took a track too high, as it proved, up the mountain side, among fine scattered larches and pines; but after some time we caught sight of our guides just disappearing at a considerable distance below us.

We made our way down to them as best we could through a dense mass of most luxuriant rhododendron and juniper, which reached often above our waists. When, at length, we were at the bottom, after much toil, our men were nowhere

to be seen, nor any clear track. Fearing to descend too low, and only guided by our very inaccurate map of the pass, we kept along a watercourse, which we concluded must supply St. Barthelemy; but as it was rapidly getting dark, before long we got into some awkward scrapes in following it. We were all but set fast at a ravine, where we had to clamber monkey-fashion along a wooden trough, supported on a frame of pine-poles, extremely slippery from the damp, slimy moss upon it. At a woodman's hut lower down we fell in with two swarthy, dark-eyed men, whose first greeting proved them to be southern Italians, and they put us in the right way.

It was so dusk by this time that we had much difficulty in keeping to the right direction, and were at length no little pleased to hear the sound of a church bell, and soon after discerned a faint white object in the distance, which we concluded to be the campanile of St. Barthélemy. Stumbling among meadows, where the numerous ditches for irrigation often tripped us up, we were following a path which led us into enclosures, when we suddenly encountered Barailler, who had come out to search for us—Charlet having been despatched in another direction—as they had become alarmed at our non-appearance.

We were right after all; and, entering the little village, we found our bags deposited at a very uninviting cabaret, the interior of which was still less promising, and apparently unusually crowded. There was not even a decent hayloft to sleep in; and seeing a good-looking house near the church, which I rightly guessed to be the curé's, I sent Barailler to ask if we could be lodged for the night, under the circumstances. We were at once hospitably received, and shown into a plain but clean room—with whitewashed walls and sanded floor, for a novelty—where, to our surprise, we found a party of six seated at supper round a well-spread table. Four were priests in long cassocks—

one a Capuchin monk, now a rarity in Piedmont, in the brown serge dress and hempen girdle of the order, his dress and person incredibly clean for a "Capucino,"—and the sixth, with long beard and moustaches, proved to be a travelling goldsmith, whose business was to visit the different churches, repairing their shrines and ornaments.

Our arrival, of course, excited considerable curiosity, and especially the fact of E.'s having crossed the Col de Vessoney. Many and eager questions were asked in French and Italian as to whence we came from, where we were going to, and why; and our explanations of our object in visiting such remote and little-known places seemed hardly to satisfy them. Yet they were most truly hospitable; an excellent supper was soon spread before us, and we fared sumptuously on the good things so unexpectedly presented to our hungry appetites.

It turned out that the reason of there being so many priests there, was a grand festa and procession on the morrow, at the little chapel of Notre Dâme de la Neige, at the highest châlets, where an annual mass was to be celebrated. In the course of conversation they asked us if we were Catholics; and on our replying that we were of the Catholic Church, but not of their branch of it, the idea seemed quite new to them, and they were very curious as to the tenets and rites of the Church of England. When, in answer to numerous inquiries as to our ritual observances, we gave them a general idea of our stated services, fasts and festivals, they seemed gratified as well as surprised that we had so many points of similarity—a liberal feeling which we duly appreciated. But their greatest astonishment was manifested when they heard we chanted the Te Deum, Canticles, Psalms, and had a litany, and daily morning and evening choral services in our cathedrals. We had again and again occasion to remark how much error and misrepresentation prevailed, as to the mere outward forms and ceremonies alone

of the Church of England, even amongst the most intelligent Catholics of enlightened and liberal Piedmont, who associate us with the Genevan school, as their standard idea of Protestantism.

We had a long conversation, and an animated one, on the subject of schools and education; and even their own accounts—which were of course as favourable as possible—fully confirmed what I had gathered in every direction, of the low state of education in North Piedmont. The salary of the schoolmasters rarely exceeds 30 francs a quarter, and is often much lower, while for half the year most of the schools were never opened at all. The children are certainly taught gratis; but nearly all they generally learn is the Catechism, and portions of the mass and services—a very little reading, less writing, and hardly any arithmetic. In fact, the general ignorance was lamentable among so fine a people, and was much felt and deeply complained of by themselves, the priests being accused, without hesitation, of the wilful intention of keeping them in ignorance. The new educational measures recently initiated by the Government will have a most salutary effect among the wealthier communes, which are more in the world; but I fear will be long in effecting much good in these remote mountain districts.

After I had agreed with the curé's brother for his mule, to take us next day to the summit of the Col St. Barthélemy, on our way over into the Val Tournanche, we were shown to our sleeping-quarters. The further end of a clean and spacious dormitory was partitioned off by a small curtain. The curé's housekeeper, deputed to wait on E., was most kind and attentive. Our beds were excellent, and, like everything else in the house, scrupulously clean—a condition so rare in Piedmont that it struck us the more. But we had not the dormitory to ourselves; two priests occupied beds in the other part, separated only by the curtain; and the sonorous snoring, which followed shortly after they put out

their light, suggested the idea that they were dreaming funeral masses in a profound bass.

Long before we awoke they had left for the châlets, having started at three, so as to be in time for mass at seven. The curé's brother, a priest from Châtillon, was left behind to attend to us; but it was evident, when I went out to see about the mule, that, notwithstanding their civility, there was something not quite right. One difficulty after another was raised about the mule, and there was clearly some intention to leave us in the lurch, if possible; but at last, with Barailler, I went in search of it myself, and got it saddled. At our six o'clock breakfast the young priest mustered courage to ask, as a great favour, if E. would have the goodness to explain to him how the English kept their teeth so white and clean; and our amusement was certainly not greater than his astonishment on learning the nature and use of tooth-brushes, which seemed to surpass his comprehension.

Our intended day's work was to effect a passage over the ridge of mountains which divides the Val St. Barthélemy from the Val Tournanche, by a Col called the Fenêtre de St. Barthélemy, or Passo di Fenetra, which is marked in the government map but not in that of Wörl. The discrepancy in the names between the two is remarkable. In the government map the head village and church of St. Barthélemy itself is entirely omitted, and it is hardly conceivable that the surveyors and compilers employed on it could ever have had Wörl's map in their hands, much less visited or made any inquiries about many localities. Our way lay up the main Val, by which the passes over into the Val de Biona, by Montagnaia and Levarnea, are reached; about half way the Fenêtre de St. Barthélemy turns suddenly to the right and crosses the ridge. We were told it was accessible for mules, but not safe riding, which proved to be true.

When at last we started, there was still something wrong

which we could not get to the bottom of, and after reaching the first little hamlet the muleteer flatly refused to go on unless I doubled his hire; but as the sum (six francs) had been agreed to originally without hesitation, I took it quietly, and told him he might leave us there with our baggage and saddle on the mountain side, to his own disgrace, but I would not be imposed upon. A long conversation ensued with our guides, accompanied with vehement gesticulations, and in a patois the most unintelligible I ever heard, though I gathered enough to know that Barailler was doing all he could to assure them as to some point on which he was silent to us. We once more set off, but again came to a standstill for a fresh parley, on which I seized the bridle of the mule myself while they were jabbering, and left the owner to follow or not as he liked.

The narrow ledge on the mountain side had been carried away by avalanches in several places, and E. and the mule crossed at some risk where I myself could hardly find footing on the steep face. At one point an unusually wide tract was bared down the mountain side by an enormous avalanche of that spring, the pines and larches lying uprooted or broken off, with their heads all one way, as if deliberately felled and laid in regular order. After descending to a small hamlet, we crossed a bright little stream running through the dell-like bottom of the well-wooded valley. Its beautifully clear waters were an irresistible temptation for a bath, and we halted near it for some time at the foot of the last and steepest part of the ascent, in a charming spot dotted with most picturesque clumps of pines, grouped on the soft herbage.

The ascent from this point was so abrupt, that at first sight it seemed impracticable for the mule, and E. dismounted, preferring to take it on foot. She had reason afterwards to congratulate herself on having done so, as in places there was scarcely footing, though a kind of zigzag was traced up the steep declivity among the scattered pines. We had climbed

up in advance, and when half way up heard a tremendous crash, when on looking down below us we saw the mule slip bodily downwards for some yards, sending huge stones bounding, with more clatter, however, than mischief; and this occurred frequently.

We reached the summit of the Col long before the others, and found it a narrow cleft in the crest of the mountain, not many yards wide, covered with greensward and low brushwood, and here we halted until the baggage came up. When at length he arrived, I paid off the muleteer, who was now all smiles, wished us a most hearty "bon voyage," and took his way back down the Col to St. Barthélemy, as if relieved.

When we were once more alone and seated in a sunny nook among the rocks, on the flowery turf, Barailler opened his lips, and, with his comical smile, asked if I knew what it was all about down at St. Barthélemy? I had not the remotest idea beyond the palpable fact of there being something suspicious, and asked him to enlighten us. To our great amusement he told us that the night before, after we had retired to rest, he had been closely questioned about us, and, after a long council on our proceedings, was seriously warned to have nothing more to do with us—as, to say the least, we were most suspicious characters. Our avoiding the towns in the valleys, and passing from Col to Col, in the most remote and unvisited districts to be found—and where no travellers had ever been before, much less a lady—was clear proof we were avoiding pursuit. In short, they told him there was no doubt I had run away with "Mademoiselle," that she was not my wife, and if he continued with us he would get himself into serious trouble. The best way for him was to join them in refusing to take us over the Col, so that we should be obliged to descend to the main valley of Aosta, by Nus, where we should be within reach of pursuit, and Barailler would so escape all further trouble about us. This cleared up the mystery, and we had many hearty laughs with "le vieux

soldat"—as he had styled and always proved himself—as we descended the other side of the Col, he and Charlet shouldering the bags and saddle once more.

The descent was most delightful. After quitting the highest rocks we wound our way down among sunny glades of larches and wide prairies, like park scenes on an Alpine scale. On the wooded hillside were quantities of whinberries loaded with fruit, and numbers of nests of the large black wood ant, which we rarely met with in Piedmont.

Torgnon was approached by much the same kind of scenery as had led us down to St. Barthélemy the day before, chiefly through open pastures and meadows, which abounded in the numerous plants, such as the milkworts, plantain, &c., which contribute the remarkably nutritious qualities to the Alpine hay. Vipers, or rather asps (*Vipera aspis*), were abundant in this valley, and we met with many in these meadows, one of which I "bottled," as being so beautifully marked and, of course, Charlet was intensely amused at my treasuring the "vermin."

At Torgnon we hunted up the curé, who took us to a little cabaret, where we could get nothing but rye bread and some thin wine; but we passed a most agreeable hour in his company. The situation of Torgnon is commanding, and has a fine view far down the valley to the south.

A steep and rough but regular path led us down to Antey, which we reached at two. Here our trusty guide Barailler, to whom we had in the short time taken a great liking, was to have left us, but we found the whole village, mules and all, had gone up to the mountains in procession to invoke the aid of St. Grat, or some other Alpine saint, in procuring rain—the very last thing we should have thanked them for doing. The one old man left creeping about the straggling houses on the hillside told us no one would return until the evening, and nothing was to be had to eat or drink until then.

On both sides we were equally unwilling to part, and Barailler at once volunteered to go on to Valtournanche, our resting-place—he and Charlet most cheerfully offering to carry the baggage themselves. We gladly accepted their services and started again up the Val, after a rest at Antey, where all our endeavours to get something eatable were in vain, and we had to content ourselves with breaking up lumps of black bread on the stone walls, and munching them as we went along. In three hours, as our men were heavily laden, we reached the village of Valtournanche, and at a little auberge, recently opened, found shelter for the night.

TR


Zermatt
Zmutt Glacier
Matterhorn
M Cervin or Furke Glacier
S Theodul Glacier
Breithorn Gl
Aroletta Glacier
Cime Blanche
Val Tournanche

CHAPTER IX.

VAL TOURNANCHE.

Valtournanche — Pass of Mont Cervin — Arrangements for ascent — Châlets of Breuil — Sunrise — Ascent of Glacier — Col St. Théodule — Meynet's cabin — Scene from summit — Mont Cervin — An ascent of the Breithorn — Animal and vegetable life — Earthquake — Return to Valtournanche — Night quarters — Descent to Châtillon — Geology — Val d'Aosta — Châtillon.

ON approaching Valtournanche, we soon found we had left for a time the unfrequented recesses we had been traversing, for the track of tourists. Of this we had unmistakeable evidence in the importunities of guides and beggars—the pests of the Swiss traveller, and imported over the Alps, or, at least, the fashion of them, with pretentious hotels, inconsiderate Englishmen, extortionate charges, and other advances of civilization.

The Val Tournanche leads by the great pass of the Mont Cervin, or Col St. Théodule, at the head of it, over to Zermatt, in the Valais. Though one of the highest passes in the Alps—about 11,000 feet—and not without danger, unless proper precautions are taken, as evinced by the frequent loss of life on it—yet it has become much better known of late years, and the number of travellers who attempt it is continually increasing.

Formerly the curé at Valtournanche used to entertain strangers, but we found a small house had recently been roughly fitted up there as an inn, with the title of the Hôtel du Mont Cervin; the landlord of which seemed to doubt whether the very short season, little more than a month or six weeks, would remunerate him for his outlay and the additional expense of licences from Government and the

Commune, which cost him 60 francs. Our beds were shown us in the two corners of the room used as the salle à manger, —one a berth in the wall, as in a Highland cabin; but they answered all the purpose, and, moreover, were tolerably clean. To give him his due, the owner was most anxious to do his best and make the most of his humble resources. Before long he appeared with an omelette—which always made us a good meal when meat was not to be had — and some wine, at a franc and a half, better than any we had got at Aosta. We had had a long walk as well as fast since leaving St. Barthélemy at seven in the morning, E. having only ridden a few miles at starting. She, however, felt no fatigue, and we therefore at once determined to lose no time and ascend the Cervin Pass next morning, if fine. I accordingly engaged a guide, Auguste Meynet, a friend of Barailler's, to go with us to the summit and back, at a charge of 10 francs, with a mule and muleteer for E. for 6 francs—fair and just prices, and any attempt at charging more ought to be resisted.

After we had supped, Barailler and Charlet begged permission to come in and speak to us. The "old soldier" had already received well-earned thanks for his extreme civility and attention, and we supposed they had come to say good-bye. But Barailler informed us they were so unwilling to leave us that they hoped we would allow them to accompany us, as volunteers, to the Cervin, which neither of them had ever seen, and they would do all they could to be of use in any way. We were only too glad to have our faithful guide for another day, as we had become really attached to him for his excellent qualities, though on so short an acquaintance. It was accordingly settled to the satisfaction of both parties. Barailler was charged with seeing to our being called and the mule ready at two in the morning, that we might make as early a start as possible; and, after barring the door with my alpenstock, we crept into our narrow beds

shortly after nine. The rain pattered against the windows heavily, and all was dark without, but the guides said it would certainly be clear the next day, and we slept soundly on the faith of their assurances.

At half-past two, when we looked outside the door, the heavy midnight shower had passed off; it was a glorious night, the sky cloudless, and the fresh rain-drops sparkled in a brilliant moonlight which made the valley almost as light as day. We were eager to be off; and after we had breakfasted on coffee and fresh eggs—a luxury after our mountain fare—the vasculum was filled with hard-boiled eggs, the remains of the omelette, and a couple of bottles of wine for the party; the mule was saddled, and we started a little after three.

Our party now consisted of six, Meynet as guide with a stout set of glacier ropes coiled round him, and a well-shod alpenstock for E.—Baraillet, Charlet, the muleteer, and our two selves. We climbed steadily up the ascent to Breuil as the full moon rode high above the mountains, and the trees, châlets, and ripe patches of corn perched on the steep mountain sides, were almost as clear as day in the floods of light. The rocky track mounted rapidly, the valley contracting as we ascended, the rocks becoming grander and hemming in the head of the valley. After entering them by a narrow gorge, the torrent of the Tournanche rushed furiously through a chasm far below our feet, and was lost in deep darkness.

As daylight began to struggle with the paling moonbeams it became very chilly, and E. was glad of all the spare wraps we carried. We passed the little chapel, beautifully situated, of Notre Dame de la Garde. The rocks on either side of us were of various kinds of serpentine, finely tinted. At length the head of the valley opened out into a small plain, with the châlets of Breuil at the upper end, and the grand pyramid of the far-famed Cervin towered into the air before us in colossal magnificence. The afternoon before, it had

been veiled in clouds as we ascended the valley, and it now burst on us with the more striking effect. To the eye accustomed to estimate mountain-heights and their proportions, this grand peak, each time it is seen, appears the more overwhelming, and in the clear morning air the first glimpse of it almost startled us, often as we had seen it.

A noble panorama rapidly opened out before us of mountains and glaciers. High on our left rose the abruptly wild ranges separating us from the Valpellina, and with the outlines of which we had become familiar from Prerayen, which lay just on the other side. On one of the loftiest of them is a smooth dome of snow, out of which rise some singular bare rocks, which Meynet pointed out as the Château des Dames; and they certainly had a remarkable resemblance to ladies marching up the snow to an Alpine castle. Round the flank of this is one of the passes from Prerayen to Breuil, already mentioned in the Val Biona. On this side it did not seem so difficult as from the other. Several glaciers filled the ravines, not large but interesting, and one in especial, with its beautifully white and broken surface like a mass of enormous curds.

We reached the châlets of Breuil in two hours from Valtournanche, when our guides went in to breakfast on polenta, while we halted by a little chapel, where several peasants were silently performing their early devotions. The valley opened out wide to the eastward, above which rose a swelling glacier range of vast width. The glowing rays of the rising sun soon shot up behind the snow-crest, and quickly dispelled the cold grey tints of early morning, fringing the ridge with a singularly defined edge of brilliant light—until the great orb suddenly uprose, red and frosty-looking as on a January morning.

As soon as our guides rejoined us, we took up a steep incline of grassy knolls, and the glacier of St. Théodule gradually came into full view—a wide dazzling sheet of snow.

Right above us, at a great height, between grey snow-peaks, was the Col itself, and, more to the right, Monte Crotello and the Cimes Blanches, by which we hoped next day to pass into the Val d'Ayas. To our left was a range of rocks, a spur of the great Cervin, running up to the narrow snowy ridge of the summit which was our destination. We kept well to the left, and climbed a huge old moraine, which indicates a vastly larger extension of the glacier in former times; the materials, a mixture of coarse gneiss, calcareous rocks, and schist, with some serpentine. The ground was hard frozen, and the miniature glaciers and snowfields which we now came to were hard and firm, promising a favourable ascent. At the ruins of a little cabin two hours above Breuil —formerly the dreary abode of the préposés, but now only four bare walls—E. dismounted, and the mule was turned loose.

Finding the pace of the mule—as it picked its way laboriously up the rough moraine—too slow to keep me warm in the sharp frosty air, I had gone on and gained a considerable distance in advance, enjoying the solemn unbroken solitude, and soon reached the edge of the glacier. A slight trace of footmarks showed where some one had been before, and, the way to the summit of the Col appearing clear enough, I plunged into the snow and commenced the ascent of the hard frozen snow of the glacier. But I had not gone very far before indications of concealed crevasses began to occur frequently, and, knowing that here was the principal difficulty of the pass, I halted until the others came up about half an hour afterwards. Meynet and myself then led, he picking out the way with an evident knowledge of what he was about; and as each day's thaw changes the surface and opens fresh crevasses, more caution is requisite than might appear at first sight necessary. One tolerably wide crevasse was arched over by a mere bridge of snow for a few yards, yawning on either side of us—a profound abyss

of blue ice-walls, fringed at the top with a row of beautiful icicles many feet in length. When we returned, the bridge was gone.

After the sun had risen little more than two hours, we began to feel its warmth inconveniently; the snow commenced to thaw, and we plunged deeply every step through the crust formed by the night's frost, which was now dissolving rapidly. From this point to the summit—an hour's very steep pull—E. felt the ascent most trying from the rarity of the air, as did some of the others; but the glittering crest of the Col right above us acted as the most powerful incentive to persevering exertions, and the party gradually neared the summit. Several more crevasses were passed, one or two of which were quite as wide as was convenient, considering their vast depth in case of a false step, and a spot was pointed out where a man had perished a short time previously.

At length we reached the firm upper part of the glacier, which was shaded from the sun by the tops of the Breithorn and Little Cervin, when Meynet suddenly startled us by an Alpine shout at the top of his voice, the cadences of which rang far and wide among the mountains. At first we gave him credit for amusing us, but, as the echoes of a third cadence died away, a small black figure appeared on the summit, standing against the clear sky, as if some dwarfie of the mountains had answered to his call. The mystery was soon cleared: it was Meynet's father, who had spent the last month on the summit in a little hut, constructed out of the remains of De Saussure's cabin. He came down part of the way to meet us, and we found him a greyheaded and greybearded old man and a most singular character.

A few minutes more brought us to the cabin, where, however, we did not stop for more than a minute or two, but climbed to the highest point on the crest of the Col, where I chose our station on a bare protruding mass of slaty serpentine rocks, an oasis in the snow. E. was disagreeably

affected by the last climb, and, covered with a plaid to keep off the sun, rested quietly until the giddiness and exhaustion should pass off and the violent palpitation subside; she had suffered in the same way once before at the Jardin, on the Mer de Glace, a much less altitude—about 9500 feet—and yet at other times, on higher elevations, had felt hardly any inconvenience. The guides all complained of unusual rarity, causing giddiness and difficulty of breathing, and were soon stretched on the rocks fast asleep. The only effect on myself was an excessive exhilaration from the elasticity of the air and the wonderfully brilliant atmosphere and magnificent scene.

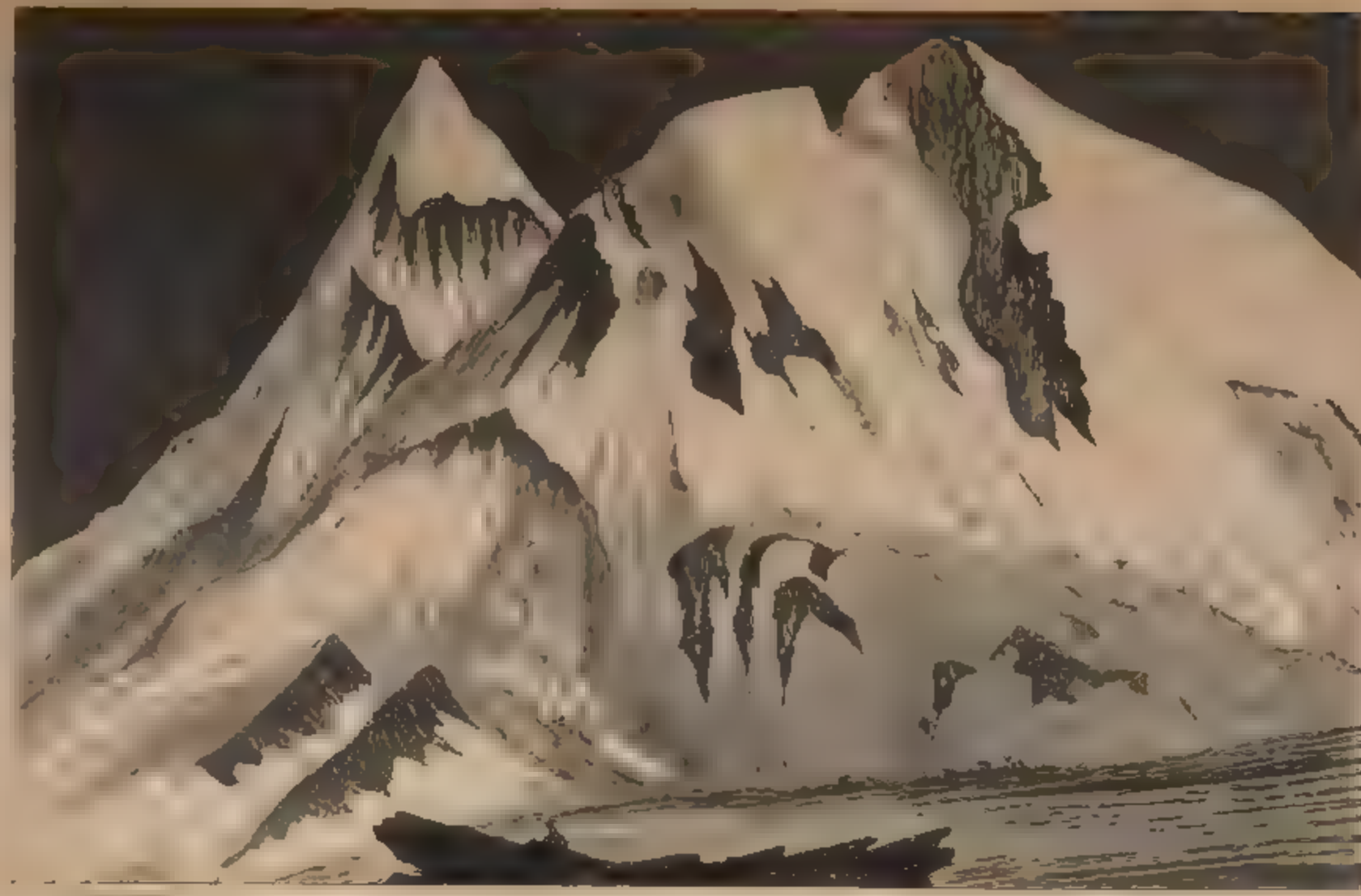
Again fortune had favoured us: not a cloud showed, even to the distant horizon. That remarkable eclipse-like dimness of brilliancy, which gives such a peculiar solemnity to these great elevations, was most striking, and yet our green veils were necessary to protect us from the intense glare of the sun and snow. We were at a height of nearly 11,000 feet, little less than the Col du Géant,* and the view was superb. To the south-west, countless Alps stretched away, in magnificent ranges, above the Grisanches, Savaranches, and Cogne, and among them our old acquaintance the Corne de Cogne, or Grivola, and the Ruitor. Nearer to us, and in the same direction, we recognised the crests we had passed on the two previous days—the grassy Col St. Barthélemy and the loftier ridge, partially covered with snow, of the Col de Vessoney. Eastward, from the narrow overhanging rock on which we had taken up our position, we looked over the edge of a deep precipice on to the wide sloping glacier leading down to Zermatt, an enormous rippled bed of pure snow, from which, on the opposite side, rose the most magnificent mounded cliffs of névé their stratified faces showing each

* Forbes gives as the result of his observations 10,938 feet for the Col St. Théodule, while other observations have fixed it at 11,185 feet. The Col du Géant, according to him, is 11,146 feet.

year's accumulation. Above them were piled the sheeted masses of the Petit Cervin, and to the left, a little in rear, the grandly graceful cone of the Breithorn, its summit an oval point of exquisitely pure unsullied white, almost too dazzling to look at, the outlines of both brilliantly defined against the deep violet sky. Monte Rosa was just concealed behind the Breithorn; but the vast Gorner Glacier, rolling down from its northern side, from the Lyskam and the Weisshorn, came in sight, sweeping round the cliffs of the Hochthaligrat, Riffelhorn, and Riffelberg. To the north-east was the range of the Bernese Oberland, recalling former days, when we first caught sight of the splendid peaks of Monte Rosa from the Gemmi.

But the most wonderful feature of all—and one which neither eye nor mind can at first fully grasp—is the stupendous mass of the Cervin, rising, a solid obelisk of utterly inaccessible rock, 8000 feet high above its glacier-beds, and much of it far too precipitous for the snow to rest on for any length of time. I surveyed it again and again with my glass, fearful lest a single feature should be left unimpressed on the memory, but I had hardly turned away for a little to compare it with some other mountain, when, on looking again, it seemed as if I had forgotten its colossal proportions, which struck one with all the force of novelty. Part of the base of it was intercepted by an intervening eminence, the Théodule Horn, but I made an excursion to it over swelling waves of half-consolidated glacier; and a very stiff and dangerous scramble up the rocks round the precipitous shoulder was well rewarded by the extended view.

These rocks are of the same character as those of the Col, varieties of slates and serpentines. The base of Mont Cervin also, as seen from here, is evidently of the same formation, as the enormous pyramidal mass which rises from it is distinctly divided into three parts, differing in colour and



THE BREITHORN AND PETIT CERVIN, FROM THE COL ST. THEODULE—VAL TOURNANCHE.

structure, as described by De Saussure * and Forbes.† The lower part consists of serpentine, slate, and gabbro, intermixed with calcareous layers. In the middle part the strata are very much contorted, and are of a calcareous grey schist, containing so much felspar that De Saussure has called it gneiss. The upper part is of a calcareous quartzose schist, which, from the similarity of its colour to the summit of the Petit Cervin ("jaune isabelle"), he concluded to be of the same formation of green slates.

When I returned, all the others were still fast asleep, and I was unwilling to disturb E. But the air had stimulated my appetite to such an extent, that it was impossible to withstand it any longer, and I began a solitary inroad on our provisions, by way of a whet, which, with a cup of Aostan wine and snow, sufficed for a time. There was not a breath of air, which seemed the more remarkable in such a situation between the two different currents on either side the Alps. The piercing glow of the heat too was intense as the light; and having taken off my veil to enjoy the scene without interruption, I suffered severely for it afterwards, losing the entire skin off my face. My hands, which I was obliged to keep bare for sketching, were so scorched with the burning rays, that I was glad to dip them continually in the water I was using for colouring, which, at half-past two, began to freeze on the snow by my side.

I was just sketching the outlines of the Breithorn and Petit Cervin, when, below me, in the distance, I saw four black specks appear, which soon resolved themselves into two guides and two travellers, ascending the glacier from Zermatt, apparently towards the Col. All alone as I had felt myself a moment before, their arrival was an event, and I went to awake E., who was now quite recovered, and we watched the party with the telescope. Instead, however, of

* Saussure, Voyages, § 2243.
† Forbes' Travels in the Alps, p. 307.

ascending to the Col, they mounted the snow-covered glacier, sweeping round the west flank of the Petit Cervin; taking to the steep snow like practised mountaineers; and it was soon clear that they were intending to ascend either the Petit Cervin or the Breithorn.

I was eager to join them, and roused Meynet and Barailler; but they said it was impossible to catch them up, as they shortly disappeared behind the Little Cervin. I watched for some time for their re-appearance; at length, like black flies, they appeared a short way from the glistening summit of the Breithorn—in a very short space of time reached the very point of the glittering cone, where they barely rested a minute or two—and disappeared on the other side; perhaps for shelter from the wind, though we had little enough. I confess I felt no little mortified not to have been with them, and shared the grand view they must have had. Meynet's father, who had been a month in his cabin on the summit, assured us he had hardly known so magnificent a day for several seasons.

A few solitary specimens of the *Ranunculus glacialis*, in bloom, braved the cold and exposure even of this lofty region. The only representatives of animal life were a number of *aphides* crawling feebly over the snow, the wonder being how such weak, delicate insects could ever have reached such an elevation; and on the snow, and under the slaty schist, I found the *Podura nivalis*, which Saussure's observant eye detected near the summit of the Breithorn.* These nimble little creatures, black and shining like grains of gunpowder, jump vigorously, with the aid of a forked tail, doubled under the abdomen, and are not inaptly called glacier-fleas. From whence they draw their nourishment in such situations is a mystery.

After midday a fleecy cirro-cumulus dotted the deep-blue sky, but at such an altitude as not to obscure a single peak,

* Saussure, Voyages, § 2249.

the bright shadows passing slowly over the vast snowy piles, every minute bringing a changed expression over the grand ranges. The solemn repose of the enormous masses of glazed and spotless snow was most sublime. We soon saw the party reappear from behind the Little Cervin; and as they rapidly dropped down, large lumps of loosened snow coursed after them like small avalanches. They took the descent to Zermatt; and their object could have been little more than to get to the top and back as quickly as possible, judging from the rapidity of their movements.

While sitting quietly on the rocks, sketching and enjoying the marvellous scene, I was startled by a sudden dull shock, accompanied by a slight oscillating movement, unmistakeable to any one who has ever felt an earthquake. It lasted about two or three seconds; and at the same time we heard a deep rumbling sound like that of a distant avalanche. The guides jumped to their feet, and exclaimed, "Le tremblement!" We afterwards learnt that it was felt in the Zermatt valley, especially at St. Nicholas, at the same moment. Similar shocks had occurred from time to time, at irregular intervals, in the same locality, ever since the catastrophe of July 25, when St. Nicholas was entirely destroyed by the violent earthquake, and the people were driven out of the ruins of their houses to encamp in the plains.

All the party were now awake, and hungry, myself too amongst them, as I had been some distance down the side towards Zermatt; and we spread the rest of our provisions on the rock, the guides going down to the cabin, where Meynet the elder found them rye-bread and "fontine." He had, I found, put up two rough beds, and offered accommodation to travellers overtaken by bad weather, or wishful to see the glories of a sunrise from the Cervin. But the custom of the few travellers who pass in a season, if even all stayed, could not pay him for his trouble, and the labour of transporting every article to such a vast height, if he relied on

nothing else; but that matter we left to his own conscience and the vigilance of the préposés. Barailler's broad hints were intelligible enough, and he entertained us with a number of amusing stories of smuggling exploits, the risks and dangers of which on these high passes must be immense. But, as before observed, it seems as great a passion as chamois-hunting, and one from which Barailler was by no means exempt. He and Charlet were partners, and next week they had on foot an important expedition over the Chermontane glacier "on business."

If we had been prepared with the necessary requisites, we should have stayed the night in hopes of seeing the sunrise, and also ascending the Breithorn; but as it was, we were obliged to return to Valtournanche. We had reached the summit about nine o'clock, and it was now past three, yet the six hours had passed like a dream; and though our guides began to be very attentive in asking when it would please Monsieur to begin the descent, we could not make up our minds to leave until the very last moment it was safe to delay. At three o'clock the signal was at length given; Meynet brought his ropes, and, fastening the end of the stout cord round himself, knotted me on at a few yards' distance, and then attached E., and the others after her, at similar distances. My eyes and face had become so much inflamed from remaining so long on the Col without a veil—for sketching or seeing properly with one was impossible—that I was glad of Meynet's offer of a pair of green spectacles, in addition to the veils we all wore. The old man came out of his cabin to wish us "bon voyage;" we wished him "bon repos" in return; and certainly no one in Europe that night slept on a loftier bed.*

* The loftiest habitation in the world is supposed to be the post-hut of Rumi Huasi on the Cordilleras, on a wild, forbidding height covered with patches of snow, and about 420 feet higher than Mont Blanc. The summit of the pass itself is 17,740 feet, or 2000 feet above the level of Mont Blanc.—*Markham's Cuzco and Lima*, p. 233.

From the intense heat of the sun the snow had greatly melted since morning, and was in a most unpleasantly slushy condition, as we plunged knee-deep into it. The crevasses were in a much more dangerous state, as the snow-bridges would not bear us, falling in when touched. Meynet had just crossed over one of them, and I was following in his steps, when I saw the snow break, and a sharp jerk of the cord caught me up, with Meynet's help, before I was half-length down the crevasse, a narrow one. We had to make a bridge of our alpenstocks for E. to pass, and so much caution was requisite that our progress was slower on the descent than in coming up.

The crevasses were more frequent towards the centre of the glacier, and might be escaped almost altogether by keeping under the mountain cliffs on our right; but by that time there was another danger equally to be avoided. The sharp frost of the night before, acting on the dripping snow-water from the previous day's thaw, had detached blocks of all sizes from the lofty rocks, and, as the afternoon sun loosened the ice-cement which only held them, down they came. First, a loud crack, then a thundering roar, with dust, and flying splinters of stone, and the huge blocks dropped from point to point of the crags, and then, plunging into the snow, bounded along or ploughed it up as they crossed our track, and rolled down the glacier far below us. It was only the larger masses that came so far; and though a great many fell as we passed, we avoided them all easily by watching their course as they came down on us. The greater part of the fragments stopped short, and curiously strewed the white surface of the glacier for a wide tract.

In three-quarters of an hour we again reached the moraine, and found the mule near the ruined cabin, rambling about the rough rocks in vain quest of grass. We looked back on the track our feet had made, winding up the wide glacier-field to the little rock on the summit of the vast icy

slope, and could hardly believe it was the distance we had found it, the surrounding mountains being on so enormous a scale. While the mule was being caught and saddled, Charlet was scrambling down among the rocks in quest of what he called "pierres précieuses;" and as he was constantly in mischief when nothing else was to be done, we had taken no particular notice of him; but on his return laden with his spoils, I found he had discovered a quantity of the identical laminæ of gneiss, or fine micaceous quartz, which De Saussure describes as being used by the country people in his days as whetstones. His treasures did not look more promising than the philosopher's specimen, which he truly says was "trop dur; l'acier glissait dessus; il ne formait pas cet engagement réciproque des parties que produit le rongement de l'acier et la faculté d'aiguiser les outils." * So Charlet's load of whetstones, which he persisted in carrying with him, were likely to be of little service. The appearance of these laminæ was singular, as they averaged about half an inch in thickness, with perfectly parallel and plane faces.

I had observed, on ascending, a ridge of high ground on the left, evidently shutting in a deep valley, under the spurs of the Mont Cervin, and as soon as the mule was saddled and E. mounted, I struck up the mountain side and soon gained the top, when I looked on a scene which amply repaid the little diversion. The enormous Matterhorn appeared to overhang the head of a narrow glen, the head of which was filled with a lofty moraine of huge blocks and rubbish, detached and brought down from one of his huge spreading bases. Far below was a torrent, fed by the shrunken glacier running at the bottom of the glen, and, as I had suspected, leading to Breuil. To get down to it was a steep descent. Hearing the shrill whistle of a marmot

* § 2260.

below, I selected a good stone, and, looking just over the abrupt edge below me, caught sight of the animal, and my aim but just missed him by an inch, as he disappeared in a heap of rocks. I continued down the course of the stream, and through rich meadows to the châlets of Breuil, where the others had not yet arrived, though I had made a considerable détour, and I waited nearly an hour before they came in sight.

It had been our original intention to sleep at the châlets of Breuil the night before, to gain more time for the Cervin pass, but, owing to there being no mules at Antey, we had been unable to get further than Valtournanche. We now went within to look at the accommodation. A loft had been simply and cleanly fitted up with a couple of deal beds, a table, and benches, and afforded as good a night's quarter as a mountaineer ought to expect. The guides refreshed themselves with more polenta and milk, and at half-past six we again started.

The steep rough track was somewhat trying for the mule, and it was half-past eight before we arrived at Valtournanche by starlight, the moon just rising. Supper, such as it was, was quickly discussed, hungry as we were. Our bed in the common apartment had been changed for one of two narrow dens, constructed at the back of the house, separated by wooden partitions, and approached by a sort of barn, and inside there was not much more than room to turn.

The night was excessively sultry, and we felt it the more after the rarified air we had been breathing all day. In our narrow dormitory the sensation was most stifling, and sleep, notwithstanding the long day's work, almost impossible. I opened first the window, then the door, but in vain; the candle between the two burned without a flicker, and the closeness was intolerable, walled in as we seemed to be in the narrow breathless valley. At length I walked out, first into

the barn, then out of doors, and at last—assured by impunity in the darkness—down to the road. Suddenly a vivid blaze of lightning glared over the mountains and crags, revealing me as I stood in shirt and slippers—succeeded almost instantaneously by a drenching down-pour of rain, which quickly drove me back, and we soon fell asleep to the refreshing music of the dripping shower, as it cooled the sultry atmosphere.

Early next morning Barailler and Charlet came to say good bye, and we were as unfeignedly sorry to part with the former as he with us. His first essay had been so agreeable that it was now his ambition to become guide to future "voyageurs," and he and Charlet had planned to return over the mountains from Breuil to Prerayen, by way of qualifying themselves. Whether they were successful or not we never heard.

My face was very painful, and completely disfigured with the sun the previous day, being blistered over with pustules up to the rim of my bonnet, and something the colour of an overburned brick. Though I always wore a Glengarry, disliking the closeness of a wide-awake—the only other tolerable head-cover—I had not felt the sun at all inconveniently before, except on the Cramont and Montagne de la Saxe, and never to such a degree as on the Cervin pass, nor do I remember more intensely brilliant sunlight.

Nothing could be more complete a contrast than the succeeding day. After the heavy rain the upper valleys and mountains were veiled with steaming mist, and our project of crossing by the Cimes Blanches to the Val d'Ayas was therefore at an end, as the guides declared the weather not to be depended on for some days. We, therefore, determined to descend the Val Tournanche to Châtillon, in the Val d'Aosta, and sent for our muleteer of the day before. He asked the unconscionable sum of ten francs for the three or four hours' journey, which I flatly refused, though he came in

more than once to see if he could not shake me, by saying there was not another mule to be had, all being on the mountains, and he must go himself if I did not engage him. I had not the slightest intention of giving in, and E. set to work arranging our last few days' specimens in the herbarium, and ironing and drying the paper, while I went out to sketch.

It was not long before a boy came up with an unladen mule, and, offering him five francs to take our baggage down to Châtillon, he ran to ask his father's leave, and shortly returned, only too happy to go, another proof how quickly imposition and overcharges follow in the track of tourists, and the contagion of their gold. Our landlord's bill, however, was a laudable exception. Humble as his incipient essay at hotel-keeping was, his demands were at least as modest. For our beds we were charged one franc each night, and for four dinners, four suppers, and two breakfasts, with a bottle of beer and a dozen eggs, eight francs only—and a trifling "buonamano" delighted him.

When all was adjusted, and the now heavy accumulated specimens packed on the saddle, as E. preferred to walk, we retraced our steps down the Val Tournanche, enjoying leisurely the beautiful scenery. The situation of Valtournanche itself, especially as seen from below, is very picturesque, finely perched on a cliff overhanging the river, embosomed in richly chequered steep slopes of rye, oats, and hemp; its white campanile and dotted châlets rising above the dark pines, and backed by the lofty mountain walls which encircle it.

Approaching Autey, the bottom of the valley spreads out into a series of verdant meadows, which were of the most charming green, studded with thousands of purple crocuses; and after the solemn pines and firs of the upper valley, the richness of the deciduous trees which studded the many-tinted rocks above was most refreshing. The torrent was so

swollen with the melting of the glaciers the day before, and the rain in the night, that it swept over the track in several places where it skirted it, and we had to find our way through the fields. Willows were numerous in the marshy soil, and the *Vanessa antiopa*, the larva of which feeds on their leaves, abounded. Two hours took us down to Antey.

A tremendous storm had for some time evidently been brewing behind us; the head of the Val was black as night, the air heavy and sultry, and we hurried on in hopes of escaping it. I had only time, therefore, to examine with my telescope the singular remains of a Roman aqueduct high up on the face of the rocks to our right. Many of the arches still cling to the cliff at successive points, and at a great height, and are evidences of a very remarkable work worthy of careful examination. There was no inn at Antey, but at a cabaret, a little lower down, by the road side, we got some rough wine and lumps of rye bread.

The scenery of the Val Tournanche increases in beauty and romantic grandeur all the way down to Aosta. Magnificent chesnuts and walnuts grow in profusion among the colossal fragments hurled from the lofty overhanging rocks —the rifts of which are studded with pines. On their bare faces no tree grows, as the serpentine of which they almost entirely consist is easily acted on by the weather, and constantly splintered, as shown by the immense number and size of the blocks which strew each side of, and almost block up, the road.

The geological formation of these cliffs constitutes one of the greatest charms of this beautiful valley; nowhere in the Alps are the rich and varied tints of rock and crag surpassed, which these huge masses of serpentine present. Where it has been long exposed to the weather the oxidizing of the iron which it contains coats it with an exquisite variety of red, purple, and deep brown shades, variegated with ashy grey, pale ochre, and lighter tints; the fresher fractures of

the rock showing its natural deep green colour, while damp patches of bright mosses and purplish black lichens complete a harmony and contrast of colouring which defies the pencil. These serpentines form great part of the valley up to Breuil, interspersed with calcareous and schistose beds, which are externally evident to the most casual observer.

A large tract here of the not very common *Pinus sylvestris*, on a low knoll of rocks, was infested by immense numbers of the gregarious caterpillars of a destructive moth, the *Ctenocampa pinivora*, the nests of which were of densely woven fine white silk, hanging among the branches like the nests of an oriole, of a long oval shape, from 6 to 12 inches in length. I was only able to get one or two by climbing the pines and breaking down the top branches. They had been left by the caterpillars, though they were two-thirds full of their dried excrement.* On the moss-covered blocks of serpentine, which grew under the spreading shade of the grand old gnarled chesnuts, we found the scaly hart's-tongue fern, *G. ceterach*, growing most luxuriantly.

Once more we looked down on the glorious Val d'Aosta, a mass of rich foliage, verdure, gardens, and cornfields, the white houses and towers of Châtillon lying below us. An old castle, perched on a rock on the opposite side, overhung the Doire, and, above it, the densely forest-covered spurs of Mont Giroux were crowned by bare snow-streaked pinnacles, while a rich afternoon haze of soft purple and blue suffused the distant landscape. By a rapid descent, through park-like scenery, continuously overshadowed by noble chesnut and walnut, we soon dropped down on Châtillon, and, passing by the gateways of mysterious iron-works, crossed a bridge over a deep narrow gorge, far down at the dusky bottom of which we discovered the busy forges contending with the pent-up torrent, which should make the greatest din.

* For an account of these angular processional caterpillars, *vide* Ratzburg, Die Forst Insecten, vol. ii. t. 8—1.

The storm which we had hurried to escape from all the way down the valley had slowly but surely chased us—big and ready to burst with rain and thunder. We hastened down the quaint Italian street of Châtillon and gained the Leone d'Oro. The mule was hardly stabled in the courtyard, and the saddle and baggage laid on the floor of our room, when a tremendous peal of thunder rattled through the valley, shaking every window, followed, in quicker succession than the prolonged echoes died away, by still heavier peals and vivid lightning. The rain came down in literal floods, and the steep street of Châtillon, with its centre canal, just before running with crystal water, was quickly pouring down like a muddy mountain torrent, so we had cause to congratulate ourselves on the haste we had made. We had, nevertheless, little ground for complaining of the weather, which had been magnificent, and, excepting the day's cloud and storm, we had neither been disappointed nor unsuccessful in a single excursion since crossing the Alps.

CHAPTER X.

VAL D'AOSTA.

Châtillon to Turin — Plains of Piedmont — Turin — Vaudois church and service — Roman Catholic Church in Piedmont — Population of Turin — Tunnel through Mont Cenis — Fruit-market — Return to Châtillon — Ivrea — Geology of south side of Alps — Val d'Aosta — Scenery — Productions — Inhabitants — Costume — Pont St Martin — Fort Bard — Castle of Verrex — Hemp picking — Chatillon — Château d'Usselle — Château de Challant and garden — Baths of St. Vincent — Mule difficulties.

THE Leone d'Oro was not the most cleanly of inns, nor the air wafted in at our windows, which looked into the back yard, the most fragrant; but we found both the padrone and his wife, who were Italians, very obliging and attentive —one of the fruits of which was the luxury of a wine-vat for a bath, in lieu of the usual little saucer-like basin and cruet of water. At Châtillon, Italian is much more generally spoken than at Aosta, though the Piedmontese French prevails.

When we had deposited our specimens — geological, botanical, and miscellaneous—in the boxes which we found awaiting us here, our next point was to traverse the Val d'Ayas, but I found it so unsatisfactory going on without better maps than I was furnished with, that we had determined to take the diligence to Turin to obtain the Government Ordnance survey, and also to replace the thermometer and lay in a supply of napoleons.

We accordingly took our seats at seven the same evening, when the diligence arrived from Aosta, and, after being so long on foot among the mountains and glaciers, the abrupt transition seemed strange at first to the inside of the lumbering vehicle, as it rumbled along the good road to the

sound of the jingling horse-bells. The lamps showed glimpses of a constant succession of vineyards, walnuts, and chesnuts, and the same rich wayside country as in the upper Val d'Aosta, until we fell asleep.

On awaking next morning the scene was entirely changed; the mountains were left far behind, all round us stretched a wide-spreading open country, and our way for the rest of the journey lay through the richly-cultivated plains of Piedmont, watered by the glacier-fed streams which pour down from the mountains, at the foot of which it lies, as its apt name denotes. Beside the Dora Baltea from the Val d'Aosta, which at Ivrea is a wide river, the road crosses the Orca from the south side of the Cogne mountains, the Malone, the Stura, and the Dora Riparia; each in succession falling into the Po, which lay a little to our left for great part of the way. The fertility of this country is extraordinary—crops of immense maize, hemp, wheat, and even rice, with endless mulberry-trees and vineyards, the very richness of which—like the plains of Lombardy—becomes at last monotonous.

The morning was brilliant and fresh after the previous day's thunder-storms, and from our position in the banquette —which I had secured at Ivrea by a little manœuvre when we changed diligences—we had a commanding view of the country. The third seat was occupied by a very agreeable and communicative travelling companion, a Government secretary, who was well acquainted with the mountains, and afterwards presented us with a lithograph of Mont Cervin from his own drawing.

The sun had risen above the beautiful Superga and the villas of the wooded Collina when we entered the city. The peasants were crowding in to the market with carts laden with various productions, piles of vegetables, and beautiful fruit of all kinds; and the scene in the bright early morning was most busy and animated. At the recommendation of

our travelling friend we took up our quarters at Trombetta's most excellent hotel; the déjeûner which was set before us seemed sumptuously luxurious after the rough fare of the mountains; and the richly gilt and decorated "sala," with its crimson velvet furniture, was an almost embarrassing contrast to our quarters at the mean little cabaret at Valtournanche only the day before.

The excellent shops of Turin supplied our wants. At Maggi's I provided myself with the large Ordnance map mounted, which was subsequently of great service, although it is obscure in many of the Alpine districts, the mountains being engraved so needlessly dark that the names are often invisible; and the latter also are often Italianized, especially towards Savoy, until they are hardly recognisable. The higher regions are very imperfectly laid down and named, and it would seem as if the surveyors had in reality ascended but few of the peaks. A reduced copy of the same map is not of much practical use in the valleys we were traversing, being on too small a scale. We soon completed all our purchases and arrangements, and devoted the rest of our time to renewing acquaintance with the fine gallery of pictures, the museum, and armoury.

Remaining over the Sunday, in the absence of any English service we went to the Vaudois church. The men were ranged on one side of the centre aisle, the women on the other, and the costumes of the latter showed they were chiefly from the Protestant valleys, not Turinese. Service commenced by the clerk reading a chapter from the 2 Cor., and another from the 1 Ephes., then the Ten Commandments, and our Saviour's comments on "This is the first and great commandment." Then the minister, in a Genevan gown, gave out from the pulpit a hymn, read prayers, and preached a sermon directed against the worship of the cross. A hymn followed the Creed, and general prayers for all men; with a special one for the King and Royal family con-

cluding the service. There did not appear to be much external reverence among the congregation, who went in and out incessantly, nor was the attendance at all proportioned to the size of the church.

However much the influence of the Roman Catholic Church in Piedmont may be on the decline—and it has of late years undoubtedly lost much of its hold on the affections of a large portion of the community—still Protestantism has as yet made no corresponding advance. Efforts have been made, and are making, by the Waldenses and others, to preach the Gospel, and many churches, such as the one at Turin, have been raised in the large towns; but the expected success has not been met with. Indeed, it has been calculated that, beyond the limits of the Vaudois valleys, there are not a thousand Protestants in the rest of Piedmont. Proselytism from the State Church is nominally, indeed, a legal offence, but there is no disposition on the part of the Government to throw any obstacle in the way of religious liberty.

The feeling against the Church is rather against it as a polity than as a religion; a struggle in fact for religious and civil liberty, in opposition to the enthralments of the Papacy, and a priesthood, who by their tyranny over body as well as soul had drawn on them the intense hatred of all classes, which had its results in the revolution of 1848. The reforms which followed on that crisis, the abolition of the Ecclesiastical Courts, in which the priests had the power of inflicting summary punishment, even to death itself, on those who came under their censure—a power as grievously felt as it was unscrupulously exercised—the expulsion of the Jesuits, —the more recent laws for the suppression of all convents not having educational or charitable functions. and the regulation of the vast revenues of the Church,—together with the promotion of national education—though they have as yet far from satisfied the Liberal party, still cannot but be re-

garded as sure and certain steps towards a better and more enlightened state of things.

The Waldenses are allowed to circulate the Scriptures and religious publications in the native language, provided they confine them to those of their own sect; but this also is a merely nominal restriction, of the infraction of which the Government takes no notice; and we were rejoiced to see the Bible—a few years ago a prohibited book, as it still is in the rest of Italy—exposed for sale in every little town. But though it is extensively circulated and eagerly read, I am obliged to admit that, as far as my own observations go among the classes with whom I had opportunities of conversing, it is used more as a text-book against the priests, to convict them of misrepresentation from their own avowed source of truth, than from any earnest regard for the great doctrines of the Gospel. I met with many instances where the Scriptures were very cleverly and logically quoted, in triumphant refutation of the dogmas of the priests, without the slightest belief in them beyond their mere use for the occasion. A remarkable instance of this was the conductor of the diligence to Turin, who would have gone much further in his arguments than mere scepticism, had I given him any encouragement. It is sad to feel the conviction that truth has so long been mixed with error, that, when implicit faith is once fairly shaken, both must share the same fate of discredit for a time. When or how the light of truth shall be clearly enough seen, through the mists of superstition on the one hand, and materialism, utter want of faith, and distrust of all doctrine on the other—so as to be the guiding star of a newly-enlightened nation, as Sardinia is proving herself to be—is a question of deep interest.

The influence of the events of 1848, on the prosperity and importance of the kingdom, is strikingly instanced in the extraordinary growth of the population of its capital since then. Previously to that date, in 1846, the population was 124,000;

while the last census, ten years later, shows it to have increased to 178,654; and now Turin stands, next to Naples, the largest capital in all Italy.

The great project of the day was the proposed tunnel under Mont Cenis, to connect Piedmont with Switzerland. Great part of the line between the Rhine and the Mediterranean, Genoa and Basle, a distance of 436 miles, was already completed, in progress, or decided on—but the vast barrier of the Alps remained the all but insuperable obstacle to complete its connection. The distance through their solid mass, said to be nine miles, it was proposed to tunnel through from either side, meeting in the middle. A new invention for boring rocks has given every prospect of success, the Government has voted a considerable grant in aid, and, I believe, this stupendous work is already making progress. It is sincerely to be hoped it may meet with the success deserved. The difficulties are undoubtedly great, and can only be thoroughly appreciated by those who are acquainted with the practical history of our own railway tunnels. Not the least delicate and critical point is, whether, in so great a distance—where the most minute error at the outset would be so vastly increased as they advance—both parties will succeed in meeting exactly in the middle. The height precluding the sinking of perpendicular shafts, an error of this kind, and which has actually occurred in a well-known case in our own country, would involve immense expense and difficulty in remedying it. The great advantages resulting to England from this line, which secures to us a direct communication with the Mediterranean independently of passing through France, are too obvious to need comment.

The weather was exceedingly sultry; successive thunderstorms failed in clearing the air, and we were soon weary of the city and its confinement. The glorious view of the distant chains of snowy Alps, with the peaks of Monte Rosa

as the central diadem—which seen from the ends of the streets is one of the greatest charms of Turin—made us impatient to be once more breathing pure elastic air and treading the free soil of the mountains, after which the closeness of the capital was insufferably stifling and feverish. All day long, soldiers were drilling and bands playing in front of our windows. It would be difficult to find a finer body of men than the Turinese militia then garrisoning the city. Their martial bearing, excellent discipline, and becoming uniform, were equally remarkable.

The next day, when all arrangements were completed, we gladly took our places in the diligence for Châtillon, carrying with us a supply of fruit. The display of all kinds in the streets was magnificent. Along the shady arcades, stalls and tables were piled with beautiful peaches of the apricot colour and appearance, as at Courmayeur; luscious purple and white figs at 8 sous a pound; pears, tomatoes, the long dark-violet fruit of the egg-plant—the "aubergine" of Paris and "melanzena" of Italy, and excellent in salads—while the pavement below was heaped with cucumbers, pumpkins, and delicious water-melons, especially the Cantalupe—irresistibly juicy and refreshing in the sultry weather. At the table-d'hôte large slices of melon were handed round after soup with cold tongue! After spending the morning at the Museum—the mineralogical department of which is very rich and well arranged, illustrating the products of Piedmont—we started at three, and arrived at Ivrea for a late dinner at half-past nine, at the large and comfortable inn.

Ivrea stands sentinel at the mouth of the Val d'Aosta, and, in the consulship of Marius and Valerius Flaccus, was occupied as a Roman station, called Eporedia, to hold in check the mountain tribes, and, as already mentioned, the 36,000 Salassians were sold here after their conquest. Dion says * that T. Varro took only those that were of youthful

* Hist. Rom., lib. 53.

age, and sold them on the understanding that they should not be freed before they were twenty years old. If the 36,000 were all under age, the population must have been a very large one at that time. The modern town has more than 8000 inhabitants, and its appearance and situation are strikingly picturesque, surmounted by the machicolated towers of the old castle. The cathedral is said to stand on the site of the old Roman temple of Apollo. Our room faced a fine sweep of the rushing Doire, now a wide and rapid river; its broad turns stretching far to the left among wooded meadows, already varied with the tints of early autumn.

We sent off by the "Poste" next day the two cases of spare clothing, and all our collections, to wait for us at Varallo, in the Val Sesia, our central depôt—retaining nothing but mountain costume and a reduced equipment for the rest of the tour. The diligence left at noon for Châtillon, and we secured the "banquette" again for the sake of the view.

Having before travelled down the Val d'Aosta by night, full daylight now enabled us to enjoy its exquisite beauty and variety of scenery. The recent thunder showers had cooled the air, freshened the vegetation, and heightened the rich colouring and beauty of the wonderfully tinted rocks, as we left the walls of Ivrea behind us, and rapidly penetrated the mountains, which begin to close in at a village aptly called Monte Stretto. The ruins of the quadrangular keep of the old castle of Montalto stand in the middle of vineyards, on a rock of pure limestone.

There are several rocks of the same kind in the neighbourhood, on which De Saussure remarks with reference to the striking difference of the prevailing formations on the two sides of the Alps. On the north, limestone or dolomite predominates, consecutive ranges of calcareous mountains of vast area extending along a great portion of it. This will be readily understood on reference to the convenient

reduction of MM. Studer and Escher's geological map, a most useful companion to the Alpine traveller. It will be seen there that a distinctly marked belt of secondary ranges of these formations, allied to the Jura limestones, runs along the north side of the lofty chain of central Alps, which—as Mont Blanc, Monte Rosa, and the higher peaks of the Oberland—are chiefly granitic or schistose rocks. But on the south side, the calcareous formations constitute a comparatively insignificant proportion of the geological system, being mere patches; that in the neighbourhood of the Allée Blanche, the only one of importance. Granites, micaceous and chlorite schists, quartz, gneiss, and every variety of metamorphic rock, some of the largest tracts of serpentine in Europe, masses of hornblende, gabbro, and syenite, form the predominant components of the ranges of the Italian valleys. It is this which gives to their scenery the remarkably abrupt and romantic character which distinguishes it entirely from the Swiss Alps, and causes that bold rugged form, and peculiar richness of rock colouring, which fascinate the eye of the artist, as much as they surpass all the efforts of his pencil.

The Val d'Aosta does not, strictly speaking, begin until just before the village of Pont St. Martin is reached, but the mountain scenery increases in beauty every mile from Ivrea—passing Borgo Franco and Settimo Vittone, the head of the commune, the striking entrance to which is under overarching walnuts—until at last it culminates in the Val d'Aosta proper. The mountains on either side are more like immense blocks of rock of great height, clothed from top to base with magnificent forest; not the severe sombre pine only, but mixed with the finest timber, chiefly indigenous sweet chesnut and walnut. The faces of these heights too are generally so rocky and steep, that there is no pasture Their colouring after the rain was lovely—deep purple almost black, olive-green, red, yellow, grey, and every inter-

mediate tint—while a few white fleecy clouds, here and there, crept slowly up their sides, as the sun dried up the shower. Wherever it is practicable, vines are carried up, on the side facing the south, to the extremest accessible hill-tops; and with more freedom and wildness of growth than nearer Aosta. They mantle elegantly over and among the scattered rocks, and in the sunniest yet fresh-looking nooks form fairy bowers, gracefully intermingled with the ferns and flowers growing from the crevices.

The Val d'Aosta, from head to foot, is indeed a continued feast to the eye, of every combination of mountain, rock, river, forest, and castled height, with distant glaciers and snow peaks, while it literally teems with the richest produce. We passed numbers of peasants carrying piled baskets of golden and green pumpkins, fruit of every kind, and the bright yellow cobs of maize—while others were sitting by the roadside under the shady walnuts, selling large heaps of ripe peaches grown in the open orchards, with delicious figs, as much as one could eat in an afternoon for a few sous. No fruit is so wholesome, nor to my own taste so excellent, and the quantity that may be eaten with impunity is only limited by one's appetite. The Spanish chesnuts were so covered with fruit that they looked at a distance like overloaded apple-trees. The gardens were more brilliant and better cultivated than any we had seen in Italy, with a profusion of flowers of every hue.

The only drawback to the wonderful fertility was the lamentable way in which the vines were affected by the fatal öidium, in so many districts almost annihilating the crop. No steps seemed to be taken to check it, except in one or two vineyards, where the branches were daubed over with white-wash. If for a time they had had the courage to sacrifice the worthless crop of grapes, and aimed at keeping a limited growth of vigorous wood, shortening it back each year, and coating it in autumn with lime and sulphur, the vines might

have been kept in comparative health, until the virulence of the disease had passed away, and then the crop would, in all probability, have been doubled after the period of rest. The vineyards of Carema on our right, between Settimo and Pont St. Martin, produce a peculiar pale red wine, somewhat of a Burgundy flavour, which is one of the best in the Val d'Aosta.

There can be no doubt, however, that the fertility of the soil, great as it is, is not nearly developed as it might be; under skilful scientific management its productiveness would be increased enormously. The fields are cultivated in the most slovenly and lazy mode; beyond imperfect irrigation, hardly any artificial means are used to assist the crops, which owe their luxuriance almost entirely to the richness and depth of the alluvial soil on which they grow year after year with hardly any change. The surface is barely scratched over with a most primitive plough, and more generally with a hoe or pointed spade, as different a tool from its stout British namesake as possible. Frequently the more intelligent natives spoke to us earnestly of what might be accomplished in their beautiful valley by an "English Company," of whose skill and capital they seemed to have the most exalted opinion.

One great hindrance to all improvement is the non-residence of the landed proprietors, who all crowd to Turin; and the life of their gay capital has such irresistible charms for the society-loving and gregarious Italians, that nothing but necessity will bring them away. Almost without exception, the upper and middle classes have not the slightest taste for the charms of country life, or country pursuits. In England such a magnificent valley, the foot of which is not forty miles from the capital, would have long ago had every obtainable and picturesque site in it greedily bought up and occupied by villas, country seats, and rich farms, almost to the very head, a length of some sixty miles. Whereas, the fact is, that, with the exception of those engaged in the

iron-works, or other mercantile pursuits, there is hardly a voluntarily-resident proprietor in it.

The costume of the women in the lower part of the Val—the commune of Settimo Vittone—was a scarlet cloth dress and blue apron, with a neatly-frilled chemise. The men wore a scarlet waistcoat faced with blue, a blue coat, red leggings, and a scarlet woollen cap—giving them a very vivid appearance. We remarked the miserable breed of fowls throughout the valley—mongrels which seemed to have not one recommendation.

The fine old Roman bridge, of a single arch, at Pont St. Martin, with the ravine of the Lys torrent behind, the castle in ruins on an eminence above, and the quaint houses grouped by the bridge, their balconies and eaves hung with glowing rows of maize and pumpkins, was a perfect epitome of a little town in these Italian valleys, and would make a most characteristic and beautiful picture. A track up the rough rocks to the right, before reaching the bridge, leads up the Val de Lys to Gressoney and the heart of Monte Rosa; part of our future route, after first traversing the Val d'Ayas, by which way we intended to reach it, so as to leave no part of the Vals unvisited.

Passing Donnas and the Roman cutting in the rock, and the milestone—which is as fresh as if not half a century old—we came on Fort Bard, so memorable for its resistance, defended by four hundred Austrians, against the French army under Napoleon, after his passage of the St. Bernard. It is now almost impregnable, and stands most imposingly in the middle of the deep gorge, on a lofty mass of rocks, which were overgrown with a velvety coat of dark-green and olive mosses. Three of its sides are completely cut off from all access by the profound bed of the river, which surrounds its base, and the narrow street which forms the only passage—the throat to the valley—is crossed by a number of arched gateways; these were so low that the high diligence barely

seemed to scrape through under them; and though, after due warning, we slipped on to the foot-board, crouching closely down, our faces seemed in dangerous proximity to the vault as we passed under one archway after another.

Fort Bard.

The ball-marks, still bespattering and furrowing the walls of the houses, show how hotly it was contested.

Charles Albert greatly added to its strength, and Piedmont is now secure from any inroad over the Alps at this point. Gallenga says* "that the Western Alps, from the Great St. Bernard to the Apennines, have on sixty-six great occasions been made the theatre of warlike exploits, from the crossing of Hannibal, to the passage of the Great St. Bernard by Napoleon: that in thirty-two instances the passage was effected in them without resistance, or even with consent: that in eighteen cases a feeble opposition was easily over-

* Vol. iii. 420. Morelli, Diversi Passagi delle Alpi, p. 17-52.

come; but that only in seven the mountains were forced against great deliberate efforts on the part of their defenders; whilst, on the other hand, the invaders' attacks have been nine times strenuously repulsed."

Another Val opens up just beyond this to the west, the Val de Champorcher, leading by a long pass, the Fenêtre de Cogne, almost unknown except to the natives of the Val, to the wonderful glaciers of Cogne, which we afterwards penetrated. At Verrex, the castle in ancient times guarded the entrance of the Val de Challant and the Val d'Ayas, as its upper part is called, our next destination. The valley from Fort Bard here is wilder, and the vineyards fewer, but the forests up to the mountain-tops are magnificent. The old castle stands beautifully. The seigneurie of Verrex anciently belonged to the three families of De Verretio, D'Alexini, and De Turrilia Thibaut Verretio; and at last, in 1368, passed out of the male line to Iblet de Challant, who built the castle. He was one of the once-powerful and wide-spread family to whom belonged so many of the castles which crown the summits of the rocky heights thickly scattered throughout the Val d'Aosta—as the Château de Challant in the Val de Challant, the Château d'Usselle, the Château d'Aimaville, and many others. The tenant of most of these once-proud feudal castles is now the solitary sparrow, associated in our minds with the crumbling arches of the Coliseum at Rome.

Through the grand gorge of Mont Jovet, by the old Roman road cut out of the face of the precipice, far beneath which the Doire thunders at a giddy depth, St. Vincent is approached by a forest of the most beautiful chesnut and walnut trees spread on the sloping greensward. St. Vincent is a cheerful-looking little spot, celebrated for its baths, which we did not stay to visit, but pushed on to Châtillon.

The costume of the peasants here differed from that of the lower valley, that of the women being of a deep blue linsey,

with a sort of black wide-awake, trimmed with broad fringe; a blue woollen skirt, and a small blue jacket, scanty, and with very short waist; on the other hand, E.'s costume of white holland riding-skirt and straw hat always created a sensation among them, and many and amusing were the exclamations and speculations we overheard.

The great employment of the women is stripping hemp; and this is remarkably the case about Ivrea, which is the capital of the Canavoise, the hemp country *par excellence.* Every woman carries a bundle of steeped and dried hemp-stalks; and as they walk along the roads, sit, talk, and even at meals, keep incessantly at work from morning to night, apparently quite mechanically, stripping off the outer husks from the fibre, and adding the latter to the bundle under their arms or at their sides. The food of the peasantry is chiefly polenta, with potatoes, rye-bread, and occasionally a little milk and cheese.

We arrived again at Châtillon in the afternoon, and immediately began our preparations for starting for the mountains next day. The chief difficulty was to obtain a mule. Guides or mules are hardly to be had at Châtillon for any excursion; and we found, as we had been frankly told by the guides of Valtournanche, when exposing their attempted imposition, that the people of Châtillon were ten times more extortionate, and at the same time the poorest in the Val d'Aosta. Only one man came in, in the evening, to offer his mule, for which he modestly asked 15 francs a-day and his own food, and, I found, hardly knew his way over the Col de Jon, while he had never seen the Furca de Betta. He lingered about for several hours, expecting to succeed; but I refused a sou above the right and just pay of 8 francs; and as there were several interesting points about Châtillon which we wished to see, and my boots wanted a fresh set of stout nails, two having been already worn out, we resolved, should he be obstinate, to stay over the next day. The

weather, which had been rainy in our absence at Turin, was showing gradual symptoms of clearing, and we lost nothing by the delay. The muleteer went off after a final refusal; and as we more than suspected the padrone of collusion, of which I gave him a hint, we determined he should not benefit by our stay.

Next morning early we walked to the beautifully-situated ruins of the Château d'Usselle, on the opposite side of the valley, descending the steep meadows down to the Doire, and, crossing it by a bridge, mounted along the edge of the precipice overhanging the river—where *Grammitis ceterach* was abundant on the rocks—and then through rich woods of sweet chesnut, growing among large moss and fern-grown blocks.

Approaching the castle by a vineyard and rude garden, the ruins of the proud old feudal structure stand grandly on the edge of a vast pile of rocks, and, with the rich distant scenery of the Val d'Aosta and its background of mountains, their tops streaked with snow, form a magnificent scene. Far below the startling precipices on which its foundations are raised with a marvellous boldness, flow the winding waters of the Doire, stretching down the deep broad valley, above which, towards Aosta, stood out the ruins of other old castles.

Opposite, on the hillside, the bright sunny houses and villas of Châtillon rise in broken tiers among the rich mixture of garden and vineyard, while the corn crops stretched up even into the regions of the pine along the secondary crests, to a height of at least 3000 feet above the sea, backed up by stern blue peaks, ribbed with snow. Behind the castle ancient forests stretch range after range for miles up the wild mountains, in former days the preserves of the Seigneurs of Usselle, abounding at that time with game, deer, and chamois.

The more closely the castle is examined the more striking and boldly chosen its situation appears, especially when standing under the huge rocks on the west side. In the

interior a vast mass of rock protrudes in a solid cone 20 feet high, occupying one-half of the basement story. Everything is on the same colossal scale: the head of the principal doorway is an immense single block of granite, out of which the archway is cut with a slight bevel, and on the face two fish, rudely carved, on one side, and a ball and some unknown instrument on the other; a huge rough mass of serpentine formed the doorsill, in which was a spacious hole, where once swung the pivot of the old ponderous gate. The windows with trefoiled heads, the double lights divided with a slender serpentine shaft and varied capitals, reminded us of Venetian architecture.

The site is, however, very much exposed to the winds, which draw up and down the valley. It was blowing pleasantly on the more sheltered side of Châtillon, but here the force of the wind was terrific, and, as it howled and whistled round the shattered walls, we could often hardly hold on to them as we clambered in and out. A noble pair of eagles, meanwhile, soared easily over our heads all afternoon, chased every now and then by a screaming posse of swallows, among which the Alpine swift (*Cypselus Alpinus*) was very conspicuous from the immense length of its wings. It seemed more abundant at Châtillon than I had noticed it anywhere before. It is found along the mountainous districts of the Mediterranean from Gibraltar to Constantinople, especially frequenting Piedmont, Switzerland, and the Tyrol, and has occurred but rarely even in England. It builds on lofty rocks and high cathedrals, as at Berne, Friburg, and elsewhere. I also saw several of what I believed to be the *Hirundo montana*, which is also found in Piedmont.

The Château d'Usselle was another of the ancient possessions of the Challant family. About thirty years ago the Count died, leaving a widow and young son; the son died, and the widow inherited it all, and remarried the Count d'Entreves, a colonel in the guards, with property in the Val

Tournanche. They had a son who died in infancy, and the property becoming the husband's on the death of the Countess, he left it to his brother, whose son now possesses it, and had married the year previously. He is the richest "propriétaire" in the Val d'Aoste, though 40,000 francs, or only 1600*l.* a-year, is his reputed income, which the Valdotians spoke of with respect as something immense.

We spent the whole morning rambling about this enchanting spot, sketching the old castle and lunching on ripe figs and bread at noon, stretched on the soft grass under the shady walnuts, with one of the most beautiful valley scenes in Europe spread before us. At a little distance behind the castle, under the hill, are a few châlets, where in the old feudal times were probably the dwellings of the dependants and retainers of the castle. Wide trellises of rough stakes were reared up against their roofs, over which trailed luxuriant festoons of pumpkins and gourds, the great fruit hanging down overhead. This mode of growth is common in Italy, and has a most luxuriant appearance when thickly hung with their pendent fruit, and may be put up against a wall or shed in almost any aspect where there is room, and a heap of half-decayed manure and soil can be had for the roots.

Returning to Châtillon, we halted to admire the modern bridge and the old Roman one below, which so picturesquely span the giddy chasm, at the bottom of which the Tournanche torrent flows.

We then climbed the hill to the Château de Challant, the residence of the Count d'Entrèves. It commands a fine view of the valley over Châtillon and its sloping gardens to the Château d'Usselle opposite. It is only a mean building, but adjoining it was one of the most brilliant and sunny little gardens I ever remember to have seen, facing the south, and separated from the path by a lofty light palisade wreathed over with clustering masses of the *Bignonia radicans*, blue *Ipomeas*, and jessamine which perfumed the air with its

fragrance, while through them was seen a blaze of flowers and some most tempting pears. The gardener, seeing us, came round to ask us to enter, and, for its size, it was a marvel of bloom. The parterres round a little fountain were a mass of balsams, zinnias, German asters, and other flowers, on which troops of brilliant butterflies were feeding and basking. The oleanders in pots and tubs were covered with blossom, and very fine—as we saw them everywhere grown in the Val, and especially in the balconies of the houses, with pomegranates and other flowers.

The gardener was a very intelligent Italian, and took great pride in his garden. The dwarf pears were remarkably fine, especially the Bon Chrétien and Beurré gris, and on inquiry I found they were on the "cotogno," or quince stock. Notwithstanding all that has been asserted of late years against their being wrought on the quince, on account of their short duration, he assured me they had been done for a great number of years and had never failed, and they were evidently quite in their prime and in full vigour. This mode of growing the pear is most extensively adopted in France, and also south of the Alps, one of the very best of arguments in its favour. An English gardener might evidently do wonders in this most favourable climate and soil, and vegetables might be grown to any extent.

Apricots and peaches were all over, but the figs were just ripening their second crop. The first crop, which, from their size, are called "grosses figues," ripen in July, and are much larger, but inferior in flavour. They are produced on the last year's wood, and the new summer shoots robbing them of the sap, great part of the crop falls off, the remaining figs, however, obtaining the greater size in consequence. The second or autumn crop, which are produced abundantly on the summer shoots, are called "fleurs des figues," and are much smaller, but of superior flavour. The fig is one of the most productive of all fruit-trees—in sub-tropical situations

favourable to it, being asserted to ripen six or eight crops in the year, nearly a perpetuity. In England, in the open air, the first crop only generally comes to maturity, although the second crop shows itself as abundantly as abroad—the green fig in greater or less numbers remaining on the branches most of the winter. They occasionally, but very rarely, come to perfection, as in Sussex, where they grow with almost Italian freedom and vigour. The first crop also is generally half lost by dropping off from the above-mentioned cause. If, however, by pinching the leaf-buds off before they expand, and as fast as they appear, no terminal shoots whatever are allowed to grow, beyond the young spring figs, they will all set, the growth of wood is encouraged lower down to cover the naked stems, and the fruit will swell, and come to a size and perfection otherwise unattainable.

Leaving the Château de Challant and its gardener, with whom we spent a very pleasant hour, we sauntered among the walks in the shade of the beautiful trees behind the château, the only cool spot we could find in the glaring afternoon heat. At a little bank, under the corner tower, under a group of chesnuts overlooking the rich valley and sloping gardens of Châtillon, we came suddenly on a party of young priests enjoying most heartily the quiet retreat and their pipes, but our appearance unfortunately put them to flight. On the rough ground on the hill side, while searching for plants, I nearly trod on a long slender snake, which struck so furiously at my feet and stick, that I at first had some difficulty in securing it, believing it to be poisonous. However it was shortly safe in the bottle, and proved to be a young specimen of the *Coluber lævis*, which is quite harmless. It was the only one of the species we saw in our travels, but the asp (*Vipera aspis*) is much more common.

In the evening we agreed to walk down to St. Vincent and dine, both for the sake of seeing the source of the

mineral waters, and also that the padrone might not profit by our detention at Châtillon. We called at the inn in passing, and informed him that we were going to St. Vincent to look out for a mule or quarters, unless on our return one could be found for us at Châtillon for the next day—but the hint proved quite effectual.

Half-an-hour's gentle walk took us there, and, ordering dinner at the Leone d'Oro, we walked up by a beautiful but rather steep road, under umbrageous chesnuts, to the "Fons Salutis," as it is styled. The source of the mineral waters lies in a little glen, called the Vallée de Bagnod: the season was, however, over, and the building enclosing the spring was shut, so we sauntered along the promenades under the trees, commanding beautiful views of the valley and its lateral mountains, the Doire, St. Vincent, and Châtillon. On our return the building was open, and we found an old woman dispensing the water to sundry applicants, all of the lower class. Many were carrying away bottles full of it, and a number of cases were lying about ready to be forwarded. I examined the source of the spring, which is in the lower story of the modest pump-room The water springs from a little hollow in a very soft and fine rock of steatite, of a pale, shining, greenish grey, so soft and decomposing that it may be scraped away with the finger nail. It is fresh, sparkling, and saline, containing iron enough to tinge its course of a bright red. It was discovered in 1792 by the Abbé Perret, and was subsequently analysed and brought into repute by Dr. Giovanetti, the early Dr. Granville of St. Vincent, who deservedly or not brought it into such fashion that it has been frequently resorted to by royalty, and an increasing number of water-drinkers. It is with evident advantage much frequented as an intermediate stage, before returning to Turin—by persons coming from Courmayeur and the waters of La Saxe—which, after the exhilarating air of Mont

Blanc, is found too trying a change. Dr. Giovanetti's analysis, as given by De Saussure,* is in 12 ounces—

Air fixe	$15\frac{27}{35}$	grains.
Sel de Glauber crystallisé ..	$57\frac{33}{55}$	,,
Natron	$8\frac{7}{56}$	,,
Sel marin	$3\frac{1}{3}$	,,
Terre calcaire	$8\frac{1}{12}$	,,
Argille	$0\frac{72}{85}$	,,
Fer	$0\frac{1}{7}$	,,

The waters are similar to, but much more strongly impregnated than, those of Courmayeur, except in iron. In a little basin below the village is a casino, with baths, rooms for reading, cards, music, &c., very comfortable, but simple: but all these were now deserted, the season being at an end. A gaudily decorated little church, in the worst taste of stucco and highly daubed frescoes, had recently been erected; a miniature of one at Turin for funeral masses, and to it the Queen had given 1000 crowns.

Mules and guides we found much more easily procurable here than at Châtillon, but when we returned our plan had been so effectual that there was no necessity to have recourse to St. Vincent. A good mule and muleteer were forthcoming on our own terms for the next day—the last time we had any trouble on the subject.

* Voyages dans les Alpes, § 963.

CHAPTER XI.

VAL D'AYAS.—VAL DE LYS.

Start from Châtillon — Festival of St. Grat — Ascent of Col de Jon — Summit — View into Val d'Ayas — Glimpse of Monte Rosa — "Les Allemands d'Ayas" — Torrent Blanche—Night-quarters "chez l'Enfant" — Châlets of Susselle — Furca di Betta — Descent into Val de Lys — Noversch — Gressoney St. Jean.

A HARD-worked stout-built mule, and a very dull but well-meaning guide, Berthon by name, and long past his prime, presented themselves at so late an hour that we were not able to start until nearly ten. The saddle and baggage had received the last finishing touches of adjustment during our stay at Châtillon, and their poise and compactness were now perfect. We were on the point of starting after a most complimentary farewell from the padrone and his wife, whose bill we had just cut down one third, when we were delayed by a long procession, which kept us for half an hour waiting until it filed past.

It was the festival of St. Grat, the great patron saint of the valley, and all business and labour were suspended, the shops closed, and the people dressed in their holiday clothes. The members of the procession were chiefly robed in white, and a number of sisters of charity wore white veils; the Host borne under a canopy was attended by banners, crosses, and lanterns as at Aosta, the priests in gold embroidered vestments and crimson copes chanting the service—the little acolytes, in surplices and crimson tippets, had great difficulty in keeping their large tapers alight, constantly borrowing fire from each other. The bells were jangling in the Italian fashion, and guns firing incessantly. A number of men and women, two and two, carrying enormous rosaries,

closed the procession, and when the last had passed we were allowed to set out.

On the road down to St. Vincent the numbers of peasants in holiday dress flocking into Châtillon were greatly taken with E.'s mule equipments, herself doubtless included, and expressed undisguised astonishment. Passing the mineral spring, we ascended for an hour through a beautiful little glen, under the cool shade of chesnut and walnut trees, with a delicious breeze to temper the heat, and the cheerful bubbling of a bright little burn which we skirted. The forest, as usual at a certain altitude, was succeeded by larch thickly studding the rocky knolls, and through their feathered boughs we had exquisite views of the opposite peaks of Mont Emilius, the Mont Jovet, Champ de Praz, and the ranges of Mont Barbeston above us. Beyond the larches, on a slope of green pastures where was a little chapel dedicated to St. Grat, all the peasants were holding high holiday, grouped on the surrounding walls and banks. A small cannon was firing salutes which echoed far and wide among the mountains, and a number of young people were chanting in effective harmony when softened by the distance. Our appearing amongst them created great excitement, but all greeted us most civilly and kindly.

The view from above the church, of the valley for many miles beyond Aosta, is one of surpassing beauty and richness. The sinuous course of the Doire, with its innumerable bends, glanced in the midday sun like polished silver. Above its banks stood the castles of Usselle, Fenis, St. Denis, and Châtillon ; St. Vincent lay at our feet, and Aosta glittered in the far blue distance. The Val to the east was shut out of sight by the intervening mountain of Amaye, but over the crest was visible the vast bed of débris which the torrent issuing from behind the ranges of the Mont Emilius brings down in devastating floods overwhelming the valley. On our left we had the richly-tinted rocks of Mont Zerbion, until we reached the summit of the Col de Jon at one.

It hardly deserves the name of a Col, being a scattered forest of larch and spruce, abounding in beautiful grassy glades of short soft turf. In one of these we seated ourselves for the midday halt on a bank covered with bilberries and Alpine strawberries, with a gurgling rivulet at our feet, and picketed the mule at a little distance. A delicious Cantalupe melon from Turin, with gressins, sparkling water from the cool stream, and wild fruit, made our dinner.

The Val d'Ayas now lay outspread below us, and light fleecy wreaths of cloud were every now and then whirled up, in astonishingly rapid eddies, from the deep bottom of the valley to the mountain tops; where they joined the pack which hid the outlying peaks of Monte Rosa from our view. Just opposite us was the little clustering village of Brussone, nestled at the foot of the steep and lofty Mont Nery, a stern grey-hued peak, over the northern flank of which we could distinguish the Col de Ranzola, leading over to Gressoney in the Val de Lys, and marked by a little white chapel on the route. A slope just above the village had a very singular appearance, being a closely chequered patchwork of alternate fields of corn and loose stones, the latter having been cleared off from the intervening spaces.

The distant chimes of the bells of Brussone, in honour of the festival of St. Grat, floated softly up from the valley, reminding us of some village church at home, and the whole scene was exquisitely peaceful and happy. After an hour spent in the enjoyment of it, and consulting guides and maps as to our resting-place for the night, without coming to any definite plan—as Berthon seemed to know nothing of the mountains—we prepared to descend, tightened the saddle-girths and packed the bags for the comfort of the mule, E. descending on foot as usual. Our path up the Val d'Ayas lay through a dark pine forest, which clung to a steep acclivity on the sunless side of Mont Zerbion, whose overhanging mass deepened the sombre shade of the grand old pines and

larches. Among the damp and dripping rocks a profusion of ferns and mosses flourished in great beauty and luxuriance, especially *P. calcareum*, exceedingly fine, *P. dryopteris*, *phegopteris*, and *A. viride*. The track had been rendered unsafe in one or two places by the giving way of the mountain side, which had barely left a narrow ledge for the mule, and once the only footing was along a couple of pine-trees with an awkward chasm below, but the animal got safely over.

Every now and then, at a point in the forest where we could see over the pine tops, we looked down on the verdant valley below, watered by a glacier torrent of a remarkable blue tint. The hill sides above it were highly cultivated, and covered with golden patches of uncut grain, which had a most rich and thriving aspect. It was, however, hardly possible to imagine two valleys—each so fertile in its own way—more dissimilar than the Val d'Ayas and the Val d'Aosta, with only a short three hours' walk between them. On the south side of the Col de Jon the corn was cut in June, here it was standing untouched in the second week of September. But the cause was soon apparent. Just as we emerged from the obscure forest into daylight again, the fleecy wreaths of cloud lifted themselves from the extreme end of the valley, and showed to our delight the glorious uprearing snow-fields of part of the Monte Rosa range—but only fitfully revealed as the clouds drifted for a moment. Probably the peaks were only the secondary range of the Lyskam and the Jumeaux, but the mystery greatly enhanced the sublimity of the sudden apparition, and no effect is more exciting in Alpine scenery than the unexpected glimpse of a dazzling snow-peak framed in a narrow rift of blue sky among the clouds, where its height seems enormous.

We now felt that we were at length approaching the chief object of our tour, the Queen of the Alps and its southern valleys, and were about to realize the long antici-

pated pleasure of thoroughly exploring them. From the Cervin pass we had scarcely seen any portion of Monte Rosa, the greater part being necessarily obscured from view by the intervening Breithorn. From the Cramont the range, though finely seen, was fifty miles distant, but now we had the prospect of contemplating it the next day in close proximity; if we were favoured with good fortune and fair weather to cross by the Betta Furca, or Col de Betta.

Quickening our steps, a short descent brought us down to the bottom of the valley. The high state of cultivation, the well-cared-for look of every available patch of ground, and the universal evidences of extreme industry, were most remarkable, especially after the slothful culture and habits of the Val d'Aosta. A vast quantity of slaty fragments of rock had been carefully cleared from the ground, and piled up in heaps under the fir-trees, out of the way, leaving little garden plots which were patterns of neatness; while field above field of ripe corn covered the hill side on our left, in the middle of which were one or two villages. A great quantity of barley had been grown here of late years for the making of beer, which since the failure of the vines has come into much more general vogue in Piedmont. The right side of the Val was a gentle incline of emerald green pasturages, on which, in a loop formed by the blue waters of the torrent, the picturesque châlets of Sapaye (Strapire of the maps) were closely squeezed together round a little white spire, as if not to waste a blade of the valuable pasture.

The upper valley in fact bears on it the stamp of a population of original character and entirely different from that of the lower, the Val de Challant—and their physiognomy, habits, and occupations are as dissimilar. Though Forbes, in his notes on the remarkable German colonies, has made no mention of the Val d'Ayas, nor has De Saussure included it among them, yet there is very good reason for concluding

that a certain district in the head of the Val d'Ayas was formerly colonized by a Teutonic immigration, as were those of Gressoney, Alagna, Rima, Rimella, and Macugnaga. They have German names amongst them; some of the registers or documents of the parish are said to be in German; and though the Romansch patois has now superseded the old language of the fatherland, its inhabitants are called by their neighbours at the present day "Les Allemands d'Ayas." The migratory habits of the male part of the population too, are exactly like those which are so characteristic of the other German settlements above mentioned. In summer all the able-bodied men go out into the different parts of Piedmont as woodcutters, sawyers, coopers, &c., and return to their wives and families for the winter, bringing with them their gains. They then employ their time chiefly in making wooden sabots, which are universally worn in the Val d'Ayas—and generally had an odd patch of green and red paint in front.

The people are a very fine and distinct race. Very few men remain at home during the summer season, but those we saw were tall, hardy, robust, and intelligent, with an air of manly independence. The women, especially the young ones, were extremely good-looking—almost the first time we had seen any approach to it since crossing the Alps—with light hair, and lustrous dark brown eyes, and remarkably fine and well-set frames. They and their neat costumes were scrupulously clean, and they wore a sort of wide-awake hat and high shirt with collar like a man. The whole of the tilling of the fields, tending the cattle, making cheeses, and getting in the crops devolves on the women during the absence of the men, and the high state of cultivation did them infinite credit. The amount of hard work they perform, and the heavy burdens they are able to carry up and down the mountains with ease, is extraordinary, and yet their straight limbs, robust health, and comeliness, shew that, with

this race, hard labour has not the injurious effect it generally produces on the weaker sex.

Our guide Berthon, who was readier with his tongue than with his feet, expatiated largely on the virtues and good qualities of "Les Allemands d'Ayas," especially their honesty and industry, contrasting them strongly with the people of Brussone and the Val Challant below. The latter he stigmatised as a mercenary set who thought of nothing but cattle-dealing and driving a hard bargain, while those of Ayas regarded their cows and the produce of their pastures, farms, and labours, chiefly as the means of enabling them to live comfortably and substantially. He remarked with emphasis that honesty was proverbial amongst them, and showed how rare he thought this virtue, by enlarging on it so much, and giving in proof as a wonderful fact, that, if any one should lose a purse in the Val and it were found, it would be returned to the owner. The curé of Ayas seemed from all we heard a most excellent man, devoting his whole time and means to his people. Among other things he had founded a small hospice for children who were poor, feeding them in winter and instructing them at his own private cost. The king had given him the "Croix de Chevalier," they told us, for his noble efforts to promote the welfare of the people.

We had intended going on for the night to S. Giacomo d'Ayas; but meeting an intelligent and civil peasant and making inquiries from him, we determined, on his strong recommendation, not to do so, since he told us that the only house where we could find shelter was the curé's, and he was represented as anything but hospitable or agreeable, whether truly or not; and moreover we were cautioned that we should find nothing to eat. He gave us his advice to climb the mountain above Fraschez, half an hour from which would bring us "chez l'Enfant," who was brother of the curé of Châtillon, "un brave homme," and would lodge us better than any one else near—besides which we should be further

on our way for crossing the Furca de Betta next day. We found our guide had two days before seen this l'Enfant at Châtillon at the curé's, and he had mentioned the probability of an English lady and gentleman ascending the Val d'Ayas and passing his house. It sounded a very promising termination to our day's journey, and it was accordingly unanimously agreed we should go.

The Torrent Blanche or Evanson, along which our path lay for some distance, was, as before remarked, of a beautiful pearly bluish tinge, like that of the rifts of deep glacier snow; it issues from the glaciers of the Cimes Blanches, the Aventina, Ayas, and Great and Little Verra, at the extremity of the valley, and was consequently much too cold for trout, for which otherwise it was admirably adapted. The contrast of its colour, as it rushed along the bright green meadows, with the dark pine forests and groups of alder (*Alnus viridis*) which fringed it, was charming. Native gold has frequently occurred in its bed in quartz pebbles, and is also found in the mountains of the Val Challant.

This kind of scenery continued up to Champoluc, near which a beautiful little cascade, like a reach of the Giesbach, gushed out of the mountain side. Hence to Fraschez the path was along the smoothest turf, among groups of deciduous and other trees, and over diverging branches of the wide torrent bed, hemmed in gradually more and more by the overhanging cliffs.

At Fraschez our guide was once more quite at fault, and as it was getting late and darkness fast approaching, I became anxious to get on and reach our destination before being overtaken by night, the way being new to us all. Going on rapidly in advance, I arrived at a châlet at last, and, making inquiries, found we had yet a considerable ascent to make up the face of the cliff, before we reached our quarters "chez l'Enfant." A woman good-naturedly came out and put us in the way, which turned up by a narrow path to the right.

Entering the pine forest once more, we mounted by a very steep rough zigzag, where the roots and rocks were so dangerous that E. soon had to dismount, as in the dark shade of the gloomy forest the path was scarcely discernible. At length, after half an hour's wearisome pull, scrambling and stumbling up through the pines, we emerged into such twilight as remained, and, reaching a little green platform, saw indistinctly a small group of buildings most singularly situated. They were at the head of a very narrow ledge of Alpine meadow, niched deeply in the face of the rocky cliff, and quite shut in by the overhanging mountains, which hemmed it in on all sides except the front, where the ledge seemed literally to shoot over into the valley below. Approaching this strange position in the closing day, the frowning peaks wrapped in deep gloom, the first sight was wild and startling, so different from what we had been led to anticipate. E.'s expectations especially had been raised at the prospects of the promised hospitality and comforts of the curé's brother's country house; but any visionary ideas were soon dispelled by the reality.

We sent our guide forward to reconnoitre, and he presently returned with l'Enfant himself, in a rough peasant's dress and old woollen nightcap, and after a little parley together he came forward and invited us to go in. A group of irregular buildings were all huddled together, the joint residence of cows, goats, and the establishment, and, winding our way among them over manure heaps and through cowyards, we reached the door. First appearances were anything but promising, but at length we were shown into a large low room wainscoted, ceiled, and floored with the natural red pine, or "arolla," with a long table down the middle, and benches, and bedstead in the corner of the same material.

We soon settled ourselves with our bags, and lighted our candles in place of the dim rude iron lamp of rancid fat which gave little or no light, and supper was the next question,

having breakfasted at six on "café au lait" and "œufs à la coq," with only a light repast of bread and fruit on the top of the Col de Jon. They very hospitably offered us the choice of what they had, and quickly a capital omelette of fresh eggs was placed before us, with rye bread, and, for a novelty, a ripe mouldy cheese of the year before, as they are universally eaten quite new. The hard black bread was here scraped down into chips by a stout cutter, fixed at one end in a pivot on a block—a luxurious improvement on the usual way of breaking it up with a hatchet, or between a couple of stones. What we had had been baked at "Toussaint" the year before, and was therefore some nine months old, but was perfectly fresh and sweet, though as dry and hard as a stone. It is only made once in the year, and is not used until it has been stored and dried some months, a custom which is probably dictated as much by economy as by taste.

But we had to sup in public. Our arrival had created an immense sensation in the lonely châlets of Susselle, and one by one the whole of the settlement, master, mistress, domestics, and herdsmen—of whom there was some considerable number—with all their children, came in and seated themselves in a grave wondering row all round the sides of the room, whispering comments on our movements. Their curiosity was especially excited as we occasionally brought little things out of the saddle-bags, such as spoons, pepper and salt, candles, silver mug, thermometer, maps, &c., which were all eagerly discussed in turn.

We ate our supper, however, with practical tranquillity, as we were very hungry, and their astonishment greatly amused us—an English lady appearing to be an inexhaustible wonder to them. But when it came to bedtime it was no easy matter to get the room clear; we told them we were somewhat fatigued, and got a straw bed made up, but their curiosity was insatiable. At last I stripped off my coat, and, threatening to undress, succeeded in putting them all to flight, when I

secured the door with our alpenstocks, wedging the spikes tight, and we had space and leisure to arrange our specimens of plants and minerals, and consult the maps as to the next day's route over the Furca de Betta, to Gressoney in the Val de Lys. The room, being over the cattle stalls and sheds, was anything but dull, and the same circumstance seemed favourable to the production of a perfect legion of flies, which began to awake with the light and swarmed over everything. However, we spread our plaids on the hard barley-straw beds, and slept too soundly to be conscious of either the flies or the fleas.

Berthon called us by order at five, when there was promise of the clouds lifting; but after an hour's anxious watching from our narrow windows, they dropped down en masse into the valley, and we made up our minds to wait till midday rather than lose the chance of the view from the pass of the Furca. A capacious copper milk-pail, in lieu of a washing-basin, was brought us to perform our ablutions in, a necessity which seemed incomprehensible to them; after which a bowl of new milk and rye bread served for breakfast. Having ample time to spare, I made an observation of the temperature of boiling water, which I found to be 92°·5 Cent.; external temp. 14°·5. Like our meals, my proceedings were watched by all the unemployed people of this singular little colony, who, as they sat around the fire of wood embers in the shed which served as a kitchen, intently looking on, seemed utterly at a loss what I was going to make out of a boiled thermometer, an instrument they had never seen or heard of before, and gravely asked me if it were some device of magic. When, however, I explained the instrument to them, and showed the proportionate rise and fall of the mercury with hot and cold water, the warm hand and the cool air outside, they were greatly delighted and astonished.

The clouds still rolling heavily down the mountains, we explored the rocky bed of the torrent which ran through the

pastures, a beautiful miniature glen with a great variety of ferns, among which *lonchitis*, *dryopteris*, and *Lycopodium helveticum* were abundant. The Arolla or *Pinus cembra* grew here in some quantity, and I climbed one after another to get some of their cones for the sake of the kernels; but though the cones were abundant, every kernel had been picked out by a bird, which appeared as it flew from the trees to be a jay, but I could not get near enough to distinguish the species in the misty clouds. This pine grows in great abundance above Ayas, where it bears much more plentifully.

Reconnoitring the position of Susselle by daylight, it seemed even more extraordinary than the night before—a mere narrow shelf of green grass let into a rift of the abrupt mountains which overhung us. A rocky point behind the group of châlets, which they named Mont Cheval, was pointed out, as from its summit during the late earthquake—which was most severely felt here for some seconds—a large mass was detached and hurled down not 100 yards from the house, where it was still lying shivered to fragments. The "tremblement" seemed to have been universally felt along the Pennine chain of Alps, but more especially on the higher points.

We found it almost impossible to stay in the house to write, from the flies which swarmed in countless thousands. The cowhouses are purposely placed in the lowest story for the sake of the warmth which they communicate in winter; but the advantage is in no small degree counterbalanced by the concomitant plague of flies in the summer. A certain number of the establishment remained here all winter, with a portion of the cows, which are stall-fed on the hay collected with infinite trouble and industry during the brief summer. The snow had not left the ground in the beginning of May, and was expected to fall again any day. The winter they spoke of as dreary and trying, the snow generally being

piled round the house six or eight feet high, through which they have to tunnel deep passages between the sheds and houses, for carrying hay, wood, and water.

A humble little chapel was appended to the group of châlets, with the object, which it is impossible to respect too highly, of having some house of worship where they might perform their devotions, and occasionally have a service in the summer, when a priest from the valley pays them a visit. Great part of the household had that morning been down to St. Giacomo to early mass at six o'clock, a stiff descent and ascent of more than an hour each way. The practical attention of these simple people to their religious duties, making them a daily business of life in such remote districts and under such difficulties, might shame many a self-sufficient Protestant at home—well content with attending a single service once a week, and giving up the rest of the only day on which he enters a place of worship or professes to give to devotion, to eating a Sunday dinner and lounging at home.

At last the clouds lifted from below us, leaving the valleys clear, when we made a start, our civil hostess greatly delighted with a moderate remuneration. As our guide knew nothing whatever of the way, having been only once over the pass many years before, and the clouds were dense enough to puzzle a more experienced person, we accepted the services of her son Baptiste, a very intelligent youth, who was delighted to go with us. He entered heartily into our researches for plants and minerals, leading us to a fine tract of the primrose-coloured anemones, and, at a word, was up at the top of one of the highest arollas, gathering cones; the kernels had not been extracted by the birds, but from the reason that they were unfortunately not yet ripe.

Above the house I noticed to my surprise some patches of springing corn—already well up—among the ripening crops of rye and barley, and, from the red colour of the young blades, evidently rye. It was the next year's crop; it is

sown in the beginning of August, and, being covered all winter by the snow after it has attained sufficient strength, does not reappear until the next spring, and is rarely reaped before September or October, thus occupying the ground some fourteen months. A few steps higher the limit of grain-crops was passed, and mounting a grassy ascent the larch also soon disappeared. That beautiful little fern the *Botrychium lunaria-minor* was plentiful on both sides of the pass, and some of the pairs of fronds, in perfect fructification, were not two inches in length. Marmot-holes were abundant, and numbers of them are caught and shot in the season, the end of autumn, before their hybernation, when they are covered with fat, which is much esteemed. The flesh is excellent.

The Val d'Ayas below us was perfectly clear to its head, round which, half-way up the mountain-side, was a continuous horizontal line, the course of a water-channel supplying St. Vincent with the clear stream which had refreshed us the day before on the Col de Jon. Wild greyish-blue heights closed in the valley, with glimpses of glaciers, while, down below, the slopes of Ayas were bright with the ripe crops of grain.

Still the mist hung heavily on the higher mountains, and after our pleasant young companion Baptiste had turned back, Berthon got frequently astray; but through the clouds we caught sight of the Col for a moment, and at last made tolerably straight for it. Occasional glimpses showed themselves of the glaciers and lower western range of Monte Rosa, above a vast wall-like ridge of rocks running up to the summit of the Col. Behind this is a difficult pass, called the Passo di Bettolina, best approached from the glacier of Verra, described to us as only a chasseur's path, but the view from it very fine.

Above us, on the right, we ought to have seen the Bett Horn, which faces the Lyskam peak of Monte Rosa, but whirling mists enveloped it, all but the stern sides over which

they hung like a dark pall. The great mass of this mountain—like the Roth Horn, of which it is an outlier—is of dark-green serpentine overlying mica schist, and a vast quantity of shivered blocks, thrown down from its face ages ago, were strewed at its base, and amongst them a little lake, the water of which was tinged of a singular bluish-green from the decomposed serpentine. If the sources of the Torrent Blanche were examined, its peculiar colour might probably be traced to the same cause. Several very large blocks were also placed on the ridge of a grassy elevation, as if transported, there being no other apparent way of accounting for their position, and the serpentine which composed some of them was most remarkably contorted, showing numerous twists in a specimen a few inches square.

By the time we reached the summit the clouds had permanently settled down for the day, and as the wind drifted them through the narrow niche between the mountains, we felt the chill and damp penetrating to our skins, lightly clothed as we were. We gladly skulked for shelter under the roofless walls of a stone-built enclosure under the rock, while we partook of some of the rye-bread from Susselle, and quenched our thirst with snow. The limited view was wild and dreary enough. A wooden cross, as usual, marks the highest point of the Col, which is, according to De Saussure, 1351 toises, or 8862 feet, in altitude. In the rocks on the summit were some singular veins of pure quartz, quite white with a sprinkling of mica, and the fine slabs of it which were strewed about were singularly regular in shape, forming flat parallelograms of various sizes, many of them beautifully coloured with the brilliant yellow and black Alpine lichen. At first I took it for marble, but the odour given out on rubbing two pieces together at once showed it to be quartz. On referring subsequently to Saussure, I found that he had also noticed it in the identical position.

We stayed no longer on the Col than was necessary, the dense brouillard pouring down with such chilling effect; and as E. dismounted for the descent, we led the way, and the guide and mule following loomed like giant figures through the thick fog a little way behind us. We could just pick our way, hardly able to see half-a-dozen yards round us, though the descent itself was easy enough.

At the châlets of Betta we met some peasants, who saluted us in German, reminding us that we were now entering the chief of the German valleys. The Teutonic accents were strange after the patois we had been so long accustomed to. The women wore a blue cloth jacket over a red woollen skirt, and a bright-coloured handkerchief tied behind the head. The Valley of Gressoney, or Val de Lys, into which we rapidly descended, was choked with mist, and it was only from a rocky promontory a little above it that we caught sight of Betta, the upper houses in the valley, and Giacomo la Trinité, a cold-looking village, with a white spire, above the winding stream of the Lys, which was working its way down to more genial regions below.

At the foot of the descent we joined a good mule-path at a point where a stone-roofed fountain of crystal water was clothed at the back by the beautiful green fronds of *Cystopteris fragilis*. Not far from it *Lycopodium selaginoides* grew in abundance on the damp banks. We were now below the clouds, and at every turn the valley became richer, after passing a tract strewn with huge masses of serpentine débris. There was a remarkable cleanliness and thriving appearance along the whole valley. The passing greeting of the peasants was in German, and the distinct costume of scarlet petticoat and dark-blue body was universal. Above the church of Noversch was a patch of the first heather we had seen, and, a little below, Gressoney St. Jean appeared in the distance, beautifully situated at the bottom of the valley. From the hamlet of Noversch a well-kept road, neatly

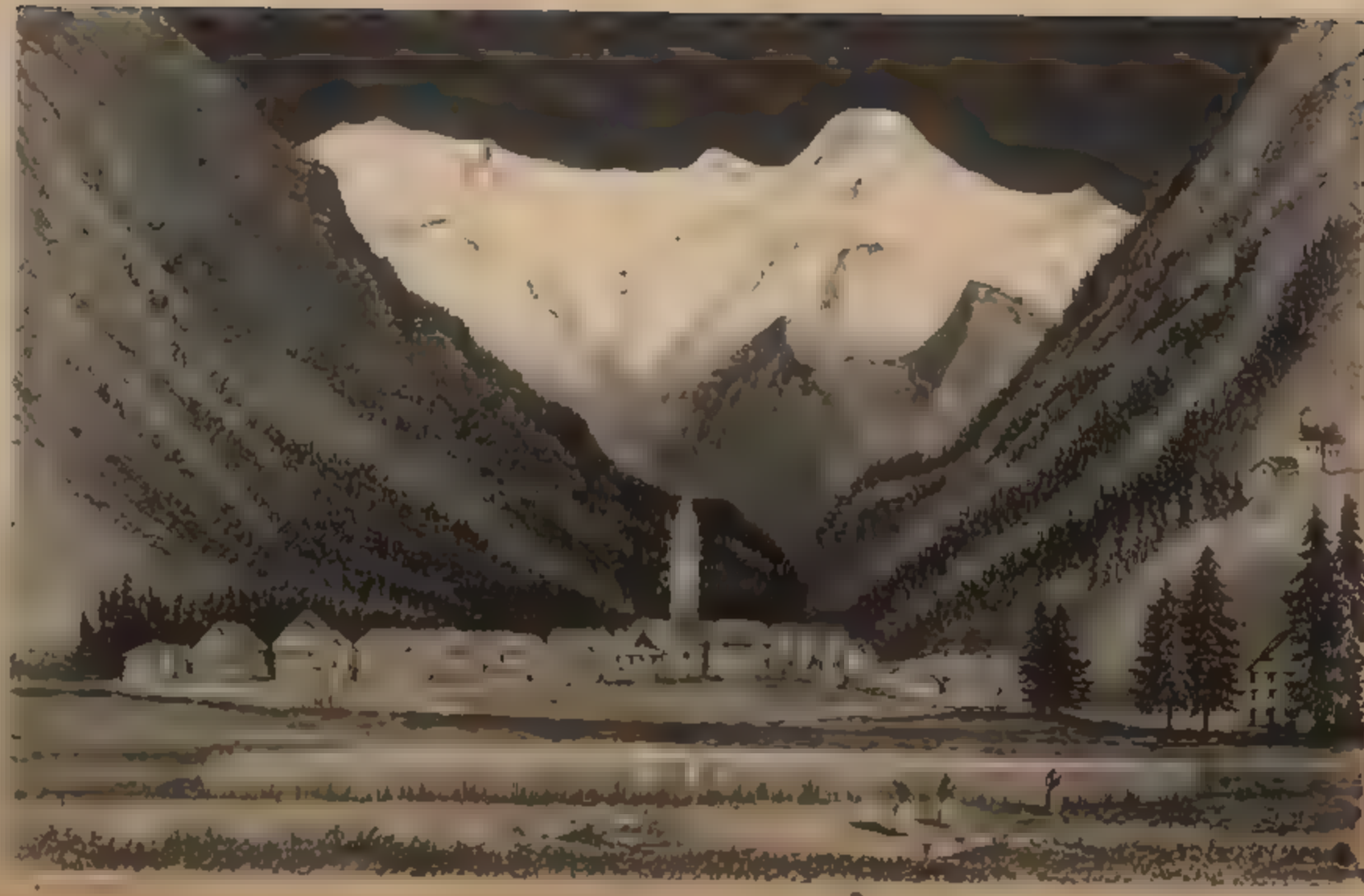
paved and conducted by regular zigzags and steps cut in magnificent green serpentine, led us down to the village—the houses of which were of unmistakeable German construction, clean, and freshly painted and whitewashed, many of them perched in situations chosen for their picturesque advantages.

We had fully intended taking up our quarters "chez Luscos," of which Forbes gives so attractive a picture—describing his sojourn in the old family mansion, the venerable Luscos presiding at the hospitable table in his old baronial-looking hall, with its huge stone-arched fireplace, and stately family portraits gracing the walls. But those days were numbered with the past: Luscos had died the year previously, and, leaving no family, the property had been divided by his nephews. A Piedmontese had taken the house, and Berthon gave him the repute of being churlish and inhospitable to strangers. He told us, however, that one of the Delapierres, an old family in the valley, had opened his house for the reception of travellers, and gave so tempting an account of the attention and comfort to be found there, that we made for it at once. Everything that he said of the host and his house was subsequently far more than verified, and it was the most enjoyable resting-place we met with in Piedmont.

Passing through the village, and by a little stone bridge over the Lys, five minutes' walk brought us to Delapierre's house, charmingly situated in the midst of green meadows in front of a pretty cascade descending from the Col de Val Dobbia — a building in the German Swiss style, brightly whitewashed, with an overhanging roof and wooden balconies all round. In front, at a little distance, flowed a bright streamlet overhung with clumps of alder, and lofty mountains hemmed in the valley, now wrapped in mist.

In a neat and simply-furnished room, exquisitely clean, we found a blazing wood fire. The host came quickly to

welcome us, and everything that attention and forethought could prompt was done by him to make us comfortable. Having changed our wet clothes, a welcome supper appeared with little delay, and we congratulated ourselves on the contrast of our quarters with those of the night before at Susselle.



GRESSONEY ST. JEAN, AND THE LYSKAM—VAL DE LYS.

CHAPTER XII.

VAL DE LYS.

Gressoney St. Jean — Excursions — Noversch — Visit to Herr Zumstein — Conformation and topography of Monte Rosa — Zumstein's ascents — Recent ascents — The Lyskam by sunset — Sunday festa and costumes — Pointe de Combetta — View of Monte Rosa — A sunset scene — Descent in the dark.

WHEN we next morning reconnoitred our situation, and the village of Gressoney, the sun had dispelled the last trace of mist, which the evening before had obscured all but near objects; and the curtain thus lifted revealed a scene of beauty for which we were unprepared. Looking up to the head of the dark narrowing glen to the north, the mass of the Lyskam glittered in radiant brightness, heightened by the fall of fresh snow—as if it were a sudden and marvellous creation, reared during the night, where the day before there had been nothing but cold grey sky. The steep sides of the Val, converging at their bases, and clothed with forest, opened out on a little plain of bright meadows, at the upper end of which, and backed by the dark pines, was the village of Gressoney St. Jean—a cluster of German houses round an Italian campanile and spire.

The lofty mountains in front separated us from the Val d'Ayas, crossed by the Col de Ranzola, over to Brussone. Behind the house was a charming little waterfall, and the path to the Col de Valdobbia, conducting to Riva in the Val Sesia. In the contracted gorge above the village, which we had descended from the Furca de Betta, another pass to the right takes over the Col d'Ollen to Alagna—while at the upper extremity of the valley, the great Lys glacier pours down from Monte Rosa. To the south, a mule track de-

scends the Val de Lys by Issime to Pont St. Martin in the Val d'Aosta. With such advantages, as a central point, in the heart of the Monte Rosa district, combined with its beautiful natural position, the simple but thorough comfort of Delapierre's house, and our host's extreme attention, we determined to make Gressoney head-quarters for some time.

Delapierre h[illegible] up the house in hopes of inducing English [illegible] quent it, and see more of the beauties of the [illegible] as those tourists who had passed over from t[illegible], by the Cols of the Val Dobbia and Ranzola, [illegible] l'Aosta, had generally done little more than stay the [illegible] or pushed on after a brief halt. Even where there was no mercenary motive, this hasty flight through their valley seemed to disappoint and puzzle the inhabitants. Proud of the grandeur of their native mountains, which can attract strangers from so far, and at such expense and often inconvenience, they are utterly at a loss to divine why they generally make all possible haste to get over the ground, hardly pausing to bestow more than a passing look on the noblest scenes when they have reached them, and still less caring to explore and enjoy them. The feats of young Cantabs and Oxonians, scampering over pass after pass, with often apparently no other object than trying who can venture in the most novel breakneck situations, or arrive at the greatest height and back, or accomplish the furthest distance, in the shortest time, have not tended to elucidate the mystery. The love of grand and glorious scenery, sporting, searching for gold —the light in which they consider geologizing—or making observations, they can understand; but any intelligible object beyond expending a superfluity of health, strength, and money, they are unable to discover in the restless haste and superficial habits of "l'exprès Anglais," which soubriquet they had appropriated in despair to these hurrying visitors.

Certainly nothing gratified the people more than taking up our quarters with them until we had thoroughly explored each district, and it made us many friends.

Amongst the numerous excursions and objects of unusual interest about Gressoney, the ascent of the Grauhaupt, a wildly grand mountain on the west side of the upper valley, had the greatest attractions for us, as, though a difficult and arduous enterprise, it was still within E.'s powers of accomplishment, and from its position necessarily commands a most magnificent view of Monte Rosa. Beside this was the glacier of the Lys, under the Lyskam, and a view, said to be very fine, from the Combetta, a mountain above the Col de Ranzola. By the Col d'Ollen or the Col de Val Dobbia we intended crossing into the Val Sesia. Our first walk was to Noversch, to visit Herr Zumstein, the well-known ascender of Monte Rosa, and one of the first who gained any of the summits of that mountain.

A dull threatening afternoon followed the clear morning, as we retraced our steps through the village of Gressoney, and up the valley to Noversch, where we found the *savant* at home in his snug little châlet, and just returned from marmot shooting on the mountains. He welcomed us heartily, and we were hardly seated when the rain poured down heavily, and kept us there great part of the afternoon, which we spent most pleasantly, hearing the narratives of his ascents of Monte Rosa, looking over a number of interesting drawings and MS. observations, and in planning excursions during our stay in the valley. Among his papers was a table by Plana, the astronomer of Turin, for the calculation of altitudes from the temperature of boiling water, adapted to Reaumur and Centigrade; and as I had been unable to find a Fahrenheit at Turin to replace my own thermometer, having only obtained a small Centigrade, Zumstein very kindly presented me with the original in the professor's handwriting. On a book-shelf—which with guns, geological

hammer, instruments, and coloured engravings of Saussure's ascent of Mont Blanc, decorated the wall—among a few choice volumes was a German edition of Forbes, published at Stutgard, 1845, to which he paid the well-merited tribute of its having "surpassed in value all that any one else had written on the subject." The many little remembrances he possessed of the visits of such travellers as Forbes, the Schlagentweits — then in the Himalayas under the auspices of Humboldt—Von Welden, Brockedon, and many other well-known names, were doubly interesting in this remote valley, entirely secluded, as it seemed, from the world, and more than twenty miles from the nearest Alpine char-road.

The narratives of the various ascents of Monte Rosa which Zumstein achieved, and the observations he made on the several different occasions, form an important and highly interesting portion of Baron von Welden's work on Monte Rosa.* As the ascent of this mountain has recently been accomplished by several travellers, and the highest point of all gained for the first time by some of our own countrymen, and the subject is now one of general interest, I shall make no apology, even at this late period, for giving a condensed account of Herr Zumstein's expeditions, both from his written narratives and also from his own personal descriptions to ourselves. But before doing so it will be advisable—both for the better understanding of the different ascents of it, as well as the various views which we afterwards enjoyed of its wonderful mass in the course of our excursions round it—to give some idea of the general conformation of this, the most complex, but, to me, the most interesting and glorious, of all the snow Alps.

The grouping and number of the summits of Monte Rosa, the ancient Mons Silvius, is very remarkable, giving it a

* Der Monte Rosa topographische und naturhistorische Skizze, nebst anhange von Herr Zumstein. Ludwig Freihern von Welden, 1824.

totally changed and often hardly recognisable configuration from different points of view. The ground-plan of it has been variously described by De Saussure as a vast crater—Von Welden says its name has arisen from the rounded form of its peaks and glaciers—and Forbes compares it to a four-rayed star or cross, formed by the intersection of two chains of mountains at right angles, the Signal Kuppe occupying the centre point. But though an irregular cruciform arrangement of the ridges is traceable on the map, the impression produced on myself at least, after careful survey of the mountain from all sides, was that of a vast loop, or, to carry out De Saussure's idea, the three sides of a crater, sweeping round from the Nord End to the Lyskam, and enclosing the head of the Gorner glacier, on the Zermatt side. The two horns of the crater open out like a funnel at each side—that on the north to the Cima di Jazzi, that on the east to the Breithorn. This disposition indeed has evidently determined the political boundary, as it forms the natural wall, by which the Swiss side is shut out from the southern valleys of Piedmont.

The many summits may be compared to the battlements of an immense bastion of snow Alps, bending round by the Signal Kuppe, in a south-westerly direction, to the Parrot-spitze and Vincent Pyramide, and again north-east to the Lyskam. This disposition appears clearly on the improved map of Messrs. Schlagentweit, and is a key to recognising the varied aspects the mountain presents on its different sides. Against the south face of this bastion run up the glacier-filled heads of the Val Anzasca, the Val Sesia, and the Val de Lys, separated from each other by two subordinate but lofty chains, which unite with the mass of Monte Rosa. By one of these chains, from the mountains of Ollen, is the only vantage-ground from which the mighty fortress has been scaled on this side. A sketch, which Zumstein allowed me to copy, made at the point where the ridge was crossed by him, opening on to the great central plateau—at an elevation

of 13,230 feet—showed it as almost encircled by a crown formed of the summits, the only break in which, and the point of access, was between the Lyskam on the left, and the Vincent Pyramide on the right.

Forbes remarks that "all the peaks which form the summit cannot be seen from any point perhaps external to them;" but we were subsequently fortunate enough to enjoy one of the most splendid views conceivable of the whole of them (the Lyskam not forming part of the real summit) from a point close to the highest crest of the little-known Col di Campello, above Rimella; and a reference to the outline of the superb group, as I sketched it on the spot,* may assist in forming a better idea of the position of the summits than any mere description. On the right the Nord End terminates the main group, and next to it the tremendous rocky cone of the Höchste Spitze, the highest point—now ascertained to be 15,284 feet. A hollow, sharp ridge connects it with the flattened head of the Zumstein Spitze, on the crest of which peeps a small rocky point, from which Zumstein detached the specimens he brought back. To the left side of it again are the domes of the Signal Kuppe and the Parrot Spitze; and the minor eminences, the Schwarzhorn, the Ludwigshöhe, and, barely visible, the Balmenhorn, intervene between the Parrot Spitze and the beautifully-defined pyramid named after its first ascender.

It only remains to notice that its remarkable form, as distinguished from the simple granite dome of Mont Blanc, is in great part owing to its geological structure, which is almost entirely of mica schist, with abundance of quartz, and also beds of gneiss of different varieties; while the strata are but slightly inclined—indeed, according to De Saussure, are almost horizontal. Zumstein showed me his specimens brought from the summit, which were of a reddish mica

* Vide frontispiece.

schist and solid white quartz; and before we left Gressoney he subsequently most kindly broke off and presented me with a portion from each, which I value as most interesting souvenirs both of the Queen of the Alps, and also of himself, one of the first adventurers who scaled it in days when such exploits were very differently regarded from the present time, and who was to Monte Rosa what De Saussure had been to its rival Mont Blanc.

Zumstein was from early youth a practised mountaineer and chasseur, and with a native of the same valley, Herr Vincent, had often talked over and planned an expedition to attempt the ascent of the summits of Monte Rosa, at that period deemed inaccessible. At length their plans assumed a definite form, and, after due preparation, the first essay was made by them in 1819. Herr Vincent was engaged in mining operations for gold, in a most singular position, now buried in deep snow and ice, as we afterwards saw from the Col d'Ollen. Here all their apparatus was sent, and Vincent, having taken up his quarters in his miners' huts, undertook a reconnoitring expedition before Zumstein's arrival. Leaving his hut at break of day, on the 5th of August, 1819, he succeeded, after many perils augmented by mist, in reaching, at 11 A.M., the summit of the icy pyramid—where he planted a wooden cross—and which has since borne the name of the first human being ever known to have set foot on any of the peaks of Monte Rosa.

M. Bernfaller, the curé of La Trinité, successfully followed his steps six days after, reaching the summit at 8½, with the advantages of a moonlight evening to start, fine weather, and hard frozen snow in climbing.

The next day Zumstein and Vincent, taking with them proper instruments, with two porters, a chasseur, and a boy, and equipped with ice-shoes, ladders, ice-hatchets, and other requisites, started for the same huts, where they spent the night. Their height, according to Zumstein's observations,

was 10,086 Paris feet, or nearly 11,000 English. He described himself as having suffered much from oppression of the chest. At dawn they began the ascent of the Indren glacier, and after some hours' toil reached the foot of the Pyramide, at the point where, from the edge of an enormous precipice, there is a view right down to the glaciers of Alagna, in the Val Sesia. A blue crevasse, filled with water of unfathomable depth, completely shut them off from the Pyramide, except by a sharp snow-saddle leading to the summit, on either side of which lay the yawning abyss. Along this perilous bridge they had to climb. A miner's boy, the bravest of the party, went first to cut holes for their feet; the jäger followed, and the rest climbed after, with their right arms clinging on to the ridge, and their feet scarce resting in the holes; while their bodies half overtopped the awful precipice, looking down on the immeasurable crevasses of the Alagna glacier. In the middle of this critical passage the jäger was seized with faintness, and sank on the snow, and Herr Vincent, who was next to him, revived him by rubbing snow on his forehead. The boy seems to have been as indefatigable as he was courageous, and worked away with the ice-hatchet until, at the top of 600 steps in the sheer ice-face, which had cost three hours' labour, they stood in joyous triumph on the summit—a triangle about 20 feet in diameter. They all suffered from excessive exhaustion: Herr Vincent had been attacked by violent nausea on ascending, and on the summit Zumstein was seized with giddiness. From his barometrical observations he estimated the height as 13,920 Paris feet; and also made an approximate survey of the other peaks, from which he then concluded that the chief one was higher than Mont Blanc. On their return they had to slide down the steep saddle—"where the slightest wind would have hurled them down like dried leaves into the great crevasse"—and at length reached the huts again at nightfall.

The following year the Academy of Sciences at Turin, interested in the first ascent of Monte Rosa, furnished Herr Zumstein with a complete set of instruments, and sent with him Molinatti, an engineer, with a theodolite, to assist in observations; but, unaccustomed to the mountains, he was subsequently of comparatively little use. On the 25th July they again climbed to the huts, from which they made an expedition to the Höhelicht—so conspicuously brilliant a point as seen from the Col d'Ollen—and had a splendid view from it of Mont Blanc and Mont Velan, the snowy Alps of the Graian chain, and the far-spreading plains of Lombardy, with the Dom of Milan, and close to them the magnificent pile of Monte Rosa. His observations gave a height of 10,917 Paris feet; and yet even here, in the bare mica schist of a neighbouring ravine, the miners of the Val de Lys had found a vein of gold ore, and built a little hut. The weather disappointed them in the intended great ascent next day. On the 30th they again returned to the huts, and started at dawn once more up the Indren glacier. At six, with the help of ladders over the crevasses, they reached the Garstlet, an arm of the great Lys glacier. The surface was now free from crevasses, and three hours brought them to the second plateau (11,310 Paris feet). From this a snow-slope of some 15 to 20° conducted to the ridge dividing Piedmont from the Valais.

It was from this point that Vincent's father and six chasseurs of the Val de Lys imagined they had discovered the lost valley—of which an old tradition of the Saas Thal had preserved the memory—called the Höhenlauben, a narrow glen, supposed to have been shut up by the closing in of the glacier, leaving its still green and rich pastures deserted and inaccessible. Saussure, who has alluded to it, believed it to have been the Alp of Pedriolo in the Val Macugnaga, but from the direction it was no doubt the head of the Valley of St. Nicholas which they saw, and took for a

new and unvisited country. Three different expeditions failed to convince them to the contrary, and even now the tradition still lingers among the lovers of the marvellous in these districts. Zumstein showed us an old document of considerable interest, relating the discovery of the new valley with most circumstantial and exciting details.

Zumstein and the Vincents now stood on the last grand plateau, which, on reaching the boundary ridge already spoken of, opens out in a vast smooth basin, hemmed in by a semicircle of peaks, the highest summits of Monte Rosa. From the sketch already mentioned which he made of the plain, it must be a sublime scene. The whole of the cluster of nine summits are here visible, beside the Lyskam, and between the Lyskam and the Nord End the vast obelisk of the Cervin comes in.

The unpractised engineer lagged far behind, and the porters still farther, so that Zumstein made up his mind to halt here for the night. Not a rock afforded the slightest shelter from the bitterly keen wind, but at last, after an hour's search, he discovered an ice crevasse ten fathoms deep, the bottom of which was filled with snow, in which extraordinary situation he determined to bivouac. The porters were so late that he had just given them up after great anxiety, and determined to turn back in the dark night, when at length to his joy they appeared with the tent, firewood, and provisions. The boldest of the party, Joseph Beck, now ventured into the awful chasm, hewing for himself some forty steps, and reaching the bottom found the snow apparently firm and solid. What lay below they could not tell, but here they pitched the tent, lighted a fire, and warmed their soup. The night was passed by them huddled together, under the shelter of the tent, and covered with fur wraps to keep out the intense cold, at an elevation of 13,128 Paris feet, or close on 14,000 English, and as Forbes says "undoubtedly the greatest height at which any one has

passed a night in Europe."* As Zumstein confesses, had a storm come on, not one of the party could have survived. As it was, the two outside sleepers in the row suffered much from the cold, and the piercing wind drove clouds of fine snow in under the tent. At the furthest end of the crevasse was a vaulted ice cavern of unfathomable depth and terrible beauty, glittering with magnificent blue crystals of every size and form—cubes, rhomboids, triangles, and columns, symmetrically proportioned.

Zumstein had seen the day before with great delight, that the peak he intended to attempt was not inaccessible; and the next morning at half past eight the party started for the ascent. An hour and a half took them to the foot of the pyramidal peak, which they had to scale by hewing steps in the hard frozen snow. This was a perilous work as they climbed up the narrow ridge on the brink of the precipice, looking down into the Val Macugnaga, a frightful abyss of 8000 or 9000 feet of sheer descent—fortunately none of them felt any giddiness. Ten steps below the summit they came on loose stones packed with ice between, and climbed more easily. Young Vincent first stepped on the very top, and amid loyal shouts of "Es lebe unser König, es leben alle Beförderer der Wissenschaften," their flag was hoisted announcing the triumphant arrival of the first adventurers who had succeeded in scaling this virgin peak of the Queen of the Alps.

Molinatti was far behind, and the guides at last dragged him up to the summit, but too late for his instruments to be of any use, even had he been equal to the task, as clouds quickly supervened.

Zumstein here found the peak he was standing on was not the highest, but that the one to the north, now known as the "Hochste Spitze" was forty-five fathoms higher. He made his barometrical observations with difficulty and uncertainty.

* Forbes, Travels, p. 336.

An iron cross which they had brought with them was planted in a hole bored in the rock, a lasting memorial of the first ascent of the Zumstein Spitze. Before leaving, Zumstein detached a piece of the highest rock, which was of mica schist. They reached the huts again safely, after forty hours on the snow. The faces of most of the party subsequently swelled so much, that their friends at Gressoney hardly recognised them.

In August 1821, the year following, Zumstein made a second ascent for the purpose of obtaining more correct barometrical observations. They slept this time at the "Hohelicht-Herberge," and next day, by a different route and with little fatigue, the snow being hard and free from crevasses, they reached the Grand Plateau. Here they found the crevasse, where they had slept on the previous ascent, entirely altered; the grotto and the place where they pitched their tent were gone, and instead a vast cleft stretched right across the plateau, and they only managed to cross it by a narrow snow bridge. Surmounting the giddy ridge overhanging the Val Macugnaga, they attained the summit by ten A.M., so much more easy was the ascent this time. The cross was standing firm, not rusted, but tinged like bronze. Zumstein now obtained satisfactory barometrical observations, which gave a result of 14,086 Paris feet. The boiling point of water he also carefully observed, and the mean result was 68°·383. De Saussure's experiments on the summit of Mont Blanc in 1787 gave 68°·993. He had a magnificent view, which he describes enthusiastically, from the Ortler Spitze in the Tyrol, to Mont Blanc north, and Monte Viso south. He brought back this time a portion of white quartz sprinkled with mica from the summit. It is remarkable that on this occasion they felt no inconvenience whatever, either during the ascent or afterwards. They left the huts at four A.M., and got down to them again at six P.M., having spent three hours on the summit.

A fourth attempt, undertaken in July 1822, was unsuccessful, and had nearly been attended with disastrous results. On the Grand Plateau they found the vast crevasse of the previous year now gone, and reached the foot of the Zumstein Spitze summit without great difficulty, except an attack of drowsiness which seized the whole of them; when suddenly a terrific storm came on, enveloping them in thick clouds, dark as night. Hail and snow buffeted them, and the guides gave themselves up as lost, lamenting for their wives and children. At last, tying themselves together with the rope, they made a desperate attempt to descend, and after extraordinary perils fortunately reached the rocks, utterly exhausted and hardly able to understand by what means they had escaped from the fearful chaos of howling wind, storm, and darkness; but truly grateful to Providence for their deliverance.

His fifth and last ascent was made in August of the same year, undaunted by the failure. His former guides were so terrified with the danger they had encountered, that it was only after great difficulty he prevailed on one of them, Marty, to accompany him, and with another guide he started again. They were detained at the huts waiting for fine weather, and in the mean time Zumstein made an excursion to the "Nase," so conspicuous above the Lys Glacier, and which he reached by the horrible precipices of the Salzen Glacier, which appeared almost inaccessible; yet they attempted them, and, after two hours' perilous scrambling, were successful; but on their return were caught by a storm in this critical position. The next day they once more began the ascent. A gale of wind unfortunately came on, and seriously impeded their progress, drifting dense masses of stifling snow against them.

The ascent of the last sharp ridge to the summit was most dangerous. Violent gusts blew from three directions, bursting with fury upon them, and blinding them with snow.

Marty led, cutting their way, Zumstein next, and then Bonda, who, however, was so terrified that he had to turn back. The other two, after incredible difficulties in contending with the wind—which compelled them to hold on by the ice, stayed by their alpenstocks, without which they would have been whirled into the vast abyss—gained the summit once more. Three observations, taken with great difficulty, when compared with others taken at the same time by Carlini at the Brera, Milan, gave a height of 14,118 Paris feet. The cross was still more bronzed than the year before, and Zumstein fastened his thermometer to it by means of wire, so as to obtain the following year the maximum of cold and heat at the summit of Monte Rosa during the twelve months. This, however, proved his last ascent. They accomplished it in 16 hours, while on former occasions it had cost them two or three days.

In 1821, August 25th, Von Welden ascended the mountain from the Val Sesia, and succeeded in reaching one of the intermediate summits, which he named after himself, the Ludwigshöhe.

The peaks of Monte Rosa remained untrodden for many years after this time until 1836, when the Signal Kuppe was for the first time scaled by P. Gnifetti, the curé of Alagna in the Val Sesia, as we shall afterwards have occasion to detail. Within the last few years the highest summit of all has been attained, and by our own countrymen, from the Zermatt side, ascending by the great Gorner Glacier from the Riffelberg. The first attempts were made by MM. Ordinaire and Puriseaux of Besançon, followed by Professors Ulrich and Studer in 1848-9. In 1850 the two well-known travellers the brothers Schlagentweit—taking with them Matthias Tauchwald, Studer's guide the year before—succeeded in reaching what they supposed to be the summit, but which is really some eighteen feet short of another point the real summit. An account of this ascent

was published in their work on the Monte Rosa group. They were followed in 1854 by the Messrs. Smyth, and afterwards by Mr. Kennedy, who describes the summit as "very remarkable. It is not compact rock, but consists of a number of huge and irregular stones that appear to have been thrown together by the action of some powerful agent. They seem to be partly mountain limestone, and partly micaceous and quartzose schist, interspersed with a large quantity of talc and slate."*

In their ascents, all these parties had taken a course up the last rocks from the ridge between the Nord End and Höchste Spitze. But in 1855, a party, consisting of Messrs. Kennedy, two Smyths, Birkbeck, and Stevenson, struck out a new path scaling the western face of the last cone forming the summit; and by a very arduous and frightful climb, by steps cut in the hard snow, and perpendicular rocks, the clefts of which were filled with snow, and a last fearful ridge requiring a steady foot and head, they gained the very highest point, the "Aller Höchste Spitze" of Monte Rosa. The Nord End and the Parrot Spitze, the Schwarzhorn, the Balmenhorn, and the Lyskam, to the best of my knowledge have not yet been scaled.

The height of the Monarch, Mont Blanc, is now fixed at 15,744 feet; that of the stately Queen of the Alps at 15,284; truly two majestic sovereigns to preside over the great Pennine chain, which, though surpassed in height, is equalled in sublimity and beauty by no other range on our globe.

But we must now return to Noversch, where, occupied in examining Zumstein's interesting records, and listening to the details of his excursions, a long afternoon passed most profitably and agreeably. He promised to accompany us to the Lys Glacier for an expedition up it, and volunteered a very pleasant scheme for the ascent of the wild Grauhaupt together —to be, as he said, his farewell to mountain and glacier

* Hudson and Kennedy, Mont Blanc and Monte Rosa, p. 127.

adventures, he being then nearly seventy-five, though his years sat lightly upon him. The family of Zumstein—or Delapierre as it is generally called, and of which our host also was a descendant—had been settled in Gressoney for more than four centuries, having migrated from Savoy in 1420. Many of them, in accordance with the custom of these valleys, had pushed their fortunes in Germany, during their residence in which their name was translated into Zumstein; and as M. Zumstein is known to the world by that name as the ascender of Monte Rosa, he prefers still to retain it. Many years before, while holding the appointment of Inspector of Forests in the Val Sesia, he acquired a thorough knowledge of all its recesses, and his information respecting them was most useful to us. As a preliminary excursion he recommended us to ascend the Pointe de Combetta on the ridge above the Col de Ranzola for the view of Monte Rosa, and at length, after fixing a day for the Lys Glacier, we set out to return to dinner, with the hospitable, but to us superfluous, farewell, which is universal at Gressoney, "Bon jour, bon appetit." The first greeting in the morning is, "Avez-vous bien dormi?" the last at night, "Bon repos;" the general salutation between, "Bon appetit," or "J'espère que vous avez bien mangé;" a custom which speaks for the appreciation of creature comforts among the well-to-do Gressoneyers.

A pleasant walk, the rain having ceased, brought us back to St. Jean, where we turned in to look at the old house of Luscos. It had been converted into a café by the present proprietor, an Italian, but the principal room remained much the same as on Forbes' visit. Full-length portraits of Maria Theresa, and her husband Francis I., and of different members of the Luscos family from 1728 to 1809, an antique clock, and other corresponding furniture, gave an unusual air of substantial gentility to the comfortable room, at the end of which was a luxurious guest chamber. The charm of it,

however, was gone; the head of the family had followed his forefathers, having died the year before at the age of sixty-four. We found the new tenant of the old family mansion the very reverse of his predecessor, and were rejoiced to return to Delapierre's hospitable roof.

While I was making a sketch of the valley from the meadows across the torrent, the Lyskam, now vividly clear in the blue sky after the rain, was suddenly lighted up by a glorious flush of sunset glow, of the richest rose and golden tints imaginable, while the deep glen was cast into dark purple shade, and long after the light had faded from the valley the bright snow crest was thus exquisitely illuminated. The wild Alpine cadences of the shepherds on the distant mountains were particularly musical and striking at Gressoney; and at night, seated by our blazing wood-fire on the hearth, as one answered another in the distance, or a group of peasants passed along the path singing part songs in excellent voice, the effect was charming.

The Sunday was a "festa," and the church well filled for the early service. After the usual mass, a sermon was preached from the altar-steps in German, and listened to with apparent interest. It was remarkable that there was no observable distinction of dress among the different classes of the female portion of the congregation, and I at first concluded that there were none but peasants. But we afterwards found that all alike, rich and poor, from the baron's daughter to his servant, wore the same costume and of very nearly the same material—a red skirt of coarse woollen cloth, a vest or boddice of the same, leaving the full snow-white sleeves uncovered, with a loose jacket of black cloth, often carried over the arm or laid aside. On great occasions, helmet-caps, richly embroidered with gold and silver lace and spangles, in the old German fashion, are worn by the women, differing according to their position. Married women and the wealthier young ladies wear one of richer character with

fan-shaped wings from ear to ear. A pleasant nook on the mountain side above the cascade of the Val Dobbia, and by the grassy edge of the rushing waters, afforded us a delightfully quiet and undisturbed retreat for the rest of the day.

The following morning was cloudless, and we availed ourselves of it to ascend the Combetta. A pack of mist crept up from the lower valley by degrees, threatening to obscure everything, but fortunately did not rise to any elevation up the mountain sides. Crossing the Lys, we made for a gorge on the opposite side of the valley, at the head of which the Col de Ranzola leads over into the Val d'Ayas, and to Brussone. The torrent had cut its course deep down at the bottom of the steep glen, now dwindled to a small stream, but the masses of boulders and shingle which choked its furrowed bed indicated the fury and volume of the winter and spring floods. Each side of the glen was covered with pine forest, and high on our left, overhanging us, the usual path led to the Col de Ranzola. We chose, however, to take the bottom of the glen for the wildness of it, and were repaid for the trouble. At some distance up it a bold promontory projected into the gorge, dividing it into two branches, and by a very steep path we clambered up among the roots of thick pines. It is so rapid that the painters of the Val Sesia, who pass it each year on their way into the Val d'Aosta, have given it the name of "baissez genoux," which it well deserves.

The successive views of the valley behind and below us increased in beauty every stage we gained of the ascent, and shortly the true summits of the snowy Monte Rosa burst into sight, gloriously dazzling through the dark pine branches, and gradually revealing themselves more and more as we mounted. Above the pines we landed on an open slope of pleasant green pasture covered with flowers, with a little cheese châlet in the distance. Straight before us was the Col de Combetta; the path to the Col de Ranzola taking to

the right. At the châlet—where I went in search of a bottle to carry some water with us from the last spring—the inmates were busy in the one great Alpine business of cheesemaking. A great copper hung over the fire, and they were pressing the curds, and grinding salt in the old-fashioned quern. The only bottle to be had was so thoroughly impregnated with the fumes of "absinthe," that it was almost impossible to get rid of the odour after repeated rinsings with sand and gravel. But with it and a package of snowballs made up from a deep drift in a hollow we had to content ourselves for the day.

Climbing the last reach, we stood on the crest, a narrow rift between sharp needle-like rocks of serpentine, brightly variegated with yellow and deep orange lichens. The view from here was beautiful, but, without stopping to examine it, we aimed at an eminence to the right, the Pointe de Combetta. Gaining its summit by a steep climb, we chose our resting-place on the mountain top, commanding one of the most magnificent prospects conceivable; Monte Rosa on one side in imposing proximity, while on the other Mont Blanc appeared like an old friend—in the far distance, yet of commanding majesty.

The mountains fortunately kept clear for a great part of the day, and we never tired of contemplating these stupendous monuments of Almighty power. To the north and south our view was intercepted by the higher eminences of the ridge on which we were. On the side from which we had ascended, the grand object of course was Monte Rosa itself, now revealing the many peaks of its summit in unsullied glory, towering high above the glaciers and snow-fields at the head of the Val de Lys. The Lyskam was seen from here to be quite a secondary part of the range. Of the group of actual summits in view, the nearest to us was the elegant cone of the Vincent Pyramide, sloping steeply down to the pass of the Col d'Ollen. Behind it rose the Signal

Kuppe, a rounded mass; over the ridge sloping from it to the north, the tip of the Zumstein Spitze just peeped; and beyond it the Höchste Spitze, clearly defined, and connected with the lower Nord End. A singular phenomenon, which continued the whole afternoon, was the constant cloud which streamed away from the Signal Kuppe, like smoke or drifting snow. The moisture in the atmosphere carried by the northerly current over the icy masses of Monte Rosa is condensed behind the leeward summit, and drifting for a certain distance is dissolved again by the mingling currents of warm air, and disappears. This occurrence is frequent when the wind comes from the northward, and is one of the greatest obstacles to a clear view on or of the southern summits. It continued so long in a ceaseless drift, hardly changing in form, and apparently inexhaustible, that I was unable to complete my sketch of the outline on that side, while all the rest of the glorious mountain was cloudless.

The Valley of Gressoney seemed a bottomless rift at our feet, growing dark and gloomy as the afternoon shadows lengthened, and one or two solitary old larches on the slope, the last and only trees visible, seemed to overhang it. Above, in face of us, extended the deeply-scarred and furrowed ridge of a long and wild range running up to Monte Rosa, apparently all of serpentine, exquisitely tinted, the prevailing hues greenish and ashy purple. Right opposite, in a deep nick in the crest, was a solitary hut, the hospice of the Col de Val Dobbia, and the path down from it to Gressoney was traceable in a long sinuous line on the stony face of the mountain.

Turning round again to the south and west were the familiar forms of Mont Blanc, the glaciers of the Ruitor, the Becca de Nona, and, above it, the rugged ranges piled one above another to the snow-covered peaks of Cogne. The Val Challant or Ayas, shut in by the ridge of Mont Zerbion, over which we distinguished our former pass of the

Col de Jon, lay below us filled with a sea of mist. From it protruded the dark mass of Mont Nery, connected with a sharp embattled ridge crested with scattered pines, and descending precipitously into the valley. The Val d'Aosta, too, as far as we could see it over the Col de Jon, was packed with a dense sea of rolling clouds, lying evenly like a vast glacier, and radiant in the bright sun; more beautiful than any unclouded view of the valley could have been.

A chamois-hunter stealing up the rocks on our right, towards the snow-sprinkled Marienhorn, was the only living object to be seen. He had come up with E. while I was at the châlet below, and she was not sorry when I joined them, as he was a most sinister-looking, suspicious character to meet with on a lone mountain. His grizzly, tangled beard and hair were set off by a cap of wild cat's-skin; a queer-looking, short rifle hung over his shoulders; he walked barefoot, carrying his shoes in his hands, until we reached the Col together, when he put them on to climb the rocks, and not long after we heard the crack of his rifle echoing among the rocks.

We stayed till sunset, and gradually the rosy tints which from east, south, and west alike characterise the Monte Rosa above all other mountains, and without doubt have given its name, began to steal over it. The dark valley of Gressoney was now filled from side to side with mist, like a gently waving bed of cotton-wool. The furrows and rifts of the rugged ranges opposite were softened down by the cool uniform shading of the closing evening—and all was sinking into sombre grey, when suddenly the last rays of the sun, already long set to us, lit up the glittering peaks of Monte Rosa with a perfectly startling and glorious effulgence of rosy crimson and pale gold. The relief of the dusky mountains and deeply-shaded valley heightened the wondrous effect of the scene of enchantment, and we gazed on its changing hues and aspect until the last rosy spot died away on the highest pinnacle, and the mighty

snow-fields and glaciers lay as if to rest in a death-like paleness, cold and grandly silent.

Night threatened to overtake us rapidly, as we had the whole descent to make, and, taking the regular path, we hastened down the rough zigzags, stumbling along, as best we could, in the dim twilight over broken ground. We soon dropped down into the cold and clammy mist which boiled up among the pines, and had considerable difficulty in making out the way, which was quite unknown to us, meeting with several awkward adventures. However, after an hour and a quarter's sharp descent, we found ourselves once more at the torrent-bed, at the mouth of the gorge, and a few minutes' groping through the meadows brought us back to Gressoney. The starry circlet of the Corona Borealis was shining through a solitary rift in the clouds above the Grauhaupt, and fitful flashes of mountain lightning flickered through the thin veil of mist.

CHAPTER XIII.

VAL DE LYS.

Expedition with Zumstein to Lys Glacier — Recent advance of glacier — Vegetation on the "Nase" — Salt-licks and chamois — Gressoney la Trinité — Baron Peccoz — Projected expedition to Val de Cogne — The baron's collection horns of bouquetin and chamois — Failure of ascent of Grauhaupt Start for Cogne Descent of Val de Lys — Issime Gorge of Guillemort — Fontainemore — Rich scenery — Gold-mines of Liliane — Val d'Aosta — St. Martin to Fort Bard.

ON the morning fixed for our expedition with M. Zumstein to the Lys Glacier we rose at four, and, after a hasty breakfast, started for Noversch, E. going on in advance, wishing to take the first part of the long day's walk easily. The sun rose, tipping the highest mountains, and gradually tinging the snowy Lyskam as his ruddy rays crept round the flank of Monte Rosa. The air was deliciously fresh after a night's shower, and only a few little fleecy clouds, which floated across the valley and caught the rosy light, were to be seen on the face of the brilliantly blue sky. Having been detained packing the provisions and finding a porter to carry them, I only caught E. up as she had reached Noversch. Zumstein was ready waiting for us, alpenstock in hand, a telescope slung on his shoulder, and his chasseur's bag at his side with provisions.

We started at once, and took it leisurely up to Gressoney la Trinité, as there was much to interest us, especially with our cicerone's acquaintance with every feature of mountain and valley. Beyond Noversch a very singular horn rises from the mountains on the left, and apparently difficult of access, but he pointed out to us "a stone man" placed there by himself many years before. On the wall by the road

side we found the beautiful little *Lycopodium Helveticum* in abundance, and in profuse fructification, a comparatively rare occurrence, as I do not ever remember to haveseen it so fruited before or since. The enormous masses of nude serpentine rock and mountain on each side of the valley are most wonderful, and the piles of similar fragments, where sometimes a mountain seems to have blown up and settled down in a heap of ruins, is extraordinary. The serpentine, where it is not oxidized by the action of the air, is of a fine dark green and extremely compact, and would be a mine of wealth if in some situation accessible for land or water carriage. As it is, this vast storehouse may probably remain till the end of time, unavailable for any human purpose, but the building of a hut or a mountain wall.

Just below Noversch the Lys torrent forces its way through a deep chasm in this formation; and on looking down from the path into the boiling current far beneath, the rocks are rounded and beautifully polished by its action. One long smooth mass lying in the centre, as the water washed over and round it, looked like a huge green hippopotamus wallowing in the stream. Near Gressoney la Trinité a break in the chain on the right disclosed the Netsch glacier, and above it the snow peak of the Weiss Horn; a gloomy and stern-looking region on the northern side. Opposite to it, above our left, we were now able to see the whole of the Grauhaupt, a grand craggy peak commanding a splendid view of Monte Rosa, and we halted some time while Zumstein pointed out the way to the ascent of its awful-looking pinnacle. This we hoped in a few days to be able to accomplish, and we were all excited at the prospect, Zumstein not less than ourselves. It is next to Monte Rosa in height of all the neighbouring peaks. Beyond it again was the Roth Horn, which derives its name from the reddish mica schist which forms the summit, resting on a long bed of serpentine, the line of division between the two distinctly visible to the

naked eye. De Saussure ascended it with his son for the view of Monte Rosa,* and Zumstein had made it a point for his trigonometrical observations.

Passing the track which turns off at the right, at a little auberge, to the Col d'Ollen, and that to the Furca de Betta on the left, we continued on up the valley, past Am Bett, the spacious hunting-box of Baron Peccoz, and the track ended among pleasant, grassy, rocky banks and larch thickets. Ferns and flowering plants were abundant, and we filled the vasculum with choice specimens. Amongst them *Lycopodium selaginoides* was particularly plentiful and large. Zumstein gathered some specimens of *Achillea atrata*, and drew our attention to its remarkable perfume. He told us he had often thought it possible that its highly aromatic odour might be made use of, and in 1846 took some of the dried flowers to a celebrated chemist at Turin, and asked him if he could not make a liqueur from it. The experiment was highly successful, and the demand for the new cordial in a country where absinthe, vermuth, and other strongly flavoured liqueurs are in universal request, became so great that Zumstein for some time made each year from 200 to 300 francs by collecting the flowers. Of late years, however, he has given it up, and Delapierre now makes a considerable trade of them. Zumstein gave it the name of "Ebolebo," the provincial patois for the plant itself; it is sent from Turin to Paris and even to London, and, having tasted some that was sent us by friends at Gressoney, we can vouch for its excellence. Several other species of *Achillea*, as the *nana*, have also perfumed flowers, but not nearly so aromatic or agreeable as the *atrata*.

The glacier of Lys, which we now reached, had recently made extraordinary advances, and was then ploughing its way downward until it was approaching the ancient frontal

* Voyages, § 2154.

moraines down the valley. Forbes states that, up to the period of his last visit in 1842,* the glacier "had retreated continually since 1820, and had left a vast enclosure—sharply defined by its moraine—a perfect waste, having, as I judged, not less than a square mile of area. Within this area is a kind of rocky precipice, above which the glacier has now retired; it is composed of gneiss, including quartz veins; and though these have never before been uncovered by the ice in the memory of man, M. Zumstein assures me that he has found marks of blast-holes where metallic veins had been sought for, probably gold, which is still worked in the neighbourhood."

Up to 1844 it continued to retreat by slow degrees, when it began again to descend at a similar rate, until the year before our visit, 1854, when it made the astonishing advance of 200 feet downwards with an average thickness of 50 feet. The rock alluded to by Forbes was overwhelmed with the vast glacier waves, the foremost of which had left it far behind, and only a small portion of it was visible at the edge of the ice, just sufficient for Zumstein to point out its situation. If the glacier continued to make as rapid an advance for another season it would soon reach the utmost limits it had before attained; though, judging by the lateral moraine, its thickness is far from proportionate to its former dimensions. The increase of one glacier and decrease of another, even on the same range of mountains, is most puzzling. In the Val Anzasca we found the Macugnaga glacier had been diminishing very much in the same ratio, though only on the other side of the same mountain.

Beyond this rock we began to ascend the steep ancient lateral moraine, far below which the modern glacier has shrunk. The rocks and débris of which it is composed were chiefly gneiss, brought down from the "Nase," and other

* Travels in the Alps, p. 338.

rocky points of the Lyskam ridge, and rise like a huge sharp backbone, along and up the edge of which we climbed. The ascent was so excessively steep, and also laborious, among the vast protruding blocks, that E. found it very trying, and with the halts which she, Zumstein, and the porter made, it took them three hours to reach the upper part, enabling me to go on in advance and obtain time for sketching and examining the glacier. The moraine, being so continuous along the whole length of it, affords the best view possible of its wonderful surface, and the various upheavals and disruptions in its course; and when I arrived at the wide basin into which the upper glaciers fall, the view was splendid.

Zumstein had had doubts—until he could see what changes had been effected in the position of the ice since his last visit—as to whether it would be feasible for us to traverse it to the other side. As soon as all came up, and we had rested, and refreshed ourselves with a mouthful of wine, after the steep climb, we descended from the summit of the moraine, crossed a high hill of débris, and reached the glacier. To our great satisfaction, after Zumstein and I had made several essays amongst a labyrinth of huge crevasses and ice-waves, we found a route practicable for E., the most formidable part of which was a bridge of slippery ice, a mere edge a few inches wide, across a yawning crevasse several yards in breadth, the bottom of which was far out of sight—its tremendous-looking walls of an exquisite blue-green, reflecting an unearthly light in the awful chasm; and hopeless must have been the lot of any one of us who had made a false step. It was, however, passed safely, and we were fairly on the main glacier, which was still widely and deeply crevassed, rising in great ridges. The day was magnificent, the glacier scene one of the grandest imaginable, and we were all in exuberant spirits, especially Zumstein, whose youthful vigour and agility seemed to return at once under

the exhilarating influence of the scene as he stepped once more on the sea of ice.

Every now and then we had to make long détours to avoid the crevasses, which were many of them wide and deep, until we reached the comparatively compact centre of the glacier. We were on a vast plateau, and before us was a magnificent glacier cascade of immense height, interrupted by rocky masses, dividing it into different streams. The largest of these projecting rocks, or rather peaks, is that called "Die Nase," or nose, a promontory rising in the centre, almost bare of snow. On this exposed eminence, at an elevation of 11,352 feet, Zumstein found four species of phænogamous plants growing, besides lichens and mosses. The species, as I remember them, were, *Phyteuma pauciflorum*, *Androsace Pennina*, *Chrysanthemum Alpinum*, and *Ranunculus glacialis;* in addition to which have since been found the *Cerastium latifolium* and *Saxifraga oppositifolia*. The occurrence of these plants in flower at such an extreme elevation, where for the greater portion of the year they must be covered with snow, is very remarkable.

The glacier wall which stretched to the right of the "Nase" above us was a magnificent object, and, along its crest, huge peaked icebergs, light spiry pinnacles, and massive blocks, of a pale transparent green ice, stood out boldly against the sky, at a height of from 2000 to 3000 feet above us. The snow was brilliantly pure, and, with the glare of the sun, almost blinding. This amphitheatre of precipitous glaciers and intervening piles of rock closed up the head of the vast Felik Plateau, which we were traversing along the course of a medial moraine, which had its origin at the base of the "Nase," and was distinctly marked in its sinuous descent for miles down the glacier.

The banded structure of the ice, as pointed out by Forbes, was remarkably distinct, each of the branches from the different glacier streams preserving its own individuality.

The water from the melted ice and snow, thawed by the powerful sun—which even on the ice was inconveniently hot—poured down in streams into the wide crevasses; and many of the singular "moulins"—profound well-like cavities in the ice—were roaring exactly like mills, with the eddying rush of water, down at a fearful depth. We amused ourselves with pushing great blocks of gneiss from the moraine up to the edge, and counting the seconds which elapsed before a plunge like thunder told they had reached the bottom.

After traversing the undulating ice, and threading through crevasses for some time, we at last at eleven reached a spot where Zumstein had planned to halt for luncheon. A large flat square slab of compact micaceous schist served as an excellent table, and with ravenous appetites we attacked our porter's basket of cold chicken, sausage, and "vin rouge." The glorious day, the success of our expedition, and the splendid scene around us, put us all into wild spirits. It was only the sixth time in his life that Zumstein had penetrated the glacier so far, his last visit having been with Forbes, and he was delighted to have escorted the first English lady who to his knowledge had set foot on the Felik Plateau. The height of our position according to him was 2534 mètres or 8313 feet English, while that of Gressoney is 4530 feet.

We spent nearly three hours in the enjoyment of the magnificent scene and making diversions on the glacier in different directions, in search of mineralogical specimens. In some huge blocks of micaceous quartz I found numerous crystals of titanium, but not much else of interest, the materials of the moraines consisting chiefly of gneiss and mica schist. At two o'clock we prepared to make our way down. Zumstein, feeling, as he said, that in all probability he should never visit the Felik Plateau again, his strength being now unequal to the exertion, bade farewell to the magnificent scene, referring to his achievements in bygone days on the vast heights far above us.

Crossing the glacier to the opposite side, the crevasses were fewer than on the right, and we made more rapid progress, reaching at last the steep moraine on the left bank, scrambling up among huge blocks which were on this side of mica schist, as generally as on the other they had been gneiss. Our path lay along the lofty crest of this moraine, a ridge with barely width enough for footing. Half way down were a few deserted châlets, where cattle are occasionally pastured, and close to them in a little green nook two salt-licks, or springs of mineral water, issuing from talcose serpentine, which here reappears. This is a favourite resort of the chamois, and Zumstein pointed out a position on the adjoining rocks from which, in former days, he used to shoot them. There are several of these saline springs in the vicinity: the Salze Furke, the highest; the Vordere Salzen; and the one we saw, the Hintere Salzen. Chamois will go almost any distance to a salt-lick, arriving at daybreak, and greedily enjoying it for about an hour, after which they start off again, returning for several days together. It is also stated by Tschudi that the chamois shot at these salt-springs are much thinner than the others, from which it would appear that they resort to them for sanitary reasons. All these mountains are now the property of Baron Peccoz, an enthusiastic sportsman, who has a shooting hut at these châlets, and also another lodge down at Am Bett.

As we descended the banks of the glacier with beautiful views of its icy waves, we had ample proof of the encroachments it had lately made; a cattle track formerly far above it was now crushed and ploughed up by the advancing ice, until all footing for them had been destroyed, together with a considerable portion of pasture, and the glacier seemed to be bearing more on this side than the other. Below this point we had a magnificent view of the masses of icebergs stalking down from the upper glaciers, riven into the most fantastic and enormous groups, of a surpassingly lovely bluish

green. The Lyskam and all the peaks above us were cloudless, bright, and sharply defined; but, in the valley below, a lurid gloom indicated that a storm was brewing, and we quickened our steps to reach shelter before it overtook us.

Taking a look at the now far advanced extremity of the glacier, discoloured and dirt-stained, from the point in front from whence travellers are generally content to view the Lys Glacier, we hastened down the valley. Before we reached La Trinité the rain poured in torrents, and we had to take shelter under the chapel which in a singular manner is built over the road, forming an arch or lichgate, where the people occasionally rest their funerals. The whole of the valley of Gressoney formed originally one parish, but in 1767 a second church was built, and Gressoney was divided into the two parishes of St. Jean and La Trinité, separated by the torrent which descends from the Netsch Glacier and Gabietsee to the Lys.

At La Trinité Zumstein borrowed two startling crimson umbrellas from a friend, and wrapped up in our plaids we reached Noversch. He had originally engaged to spend the evening with us at Gressoney, but now declared himself so tired and done with the day's excursion, that he was unable to do so, and in pouring rain we descended rapidly from Noversch, reaching Delapierre's after nearly fourteen hours' continuous walking for E., who however felt no unusual fatigue.

In the evening Baron Peccoz, whose acquaintance we had already made, came in to invite us to visit his collection of horns and other spoils of the chace. His fame as an indomitable chasseur is widely known both in Piedmont and in Germany. Residing at Munich for the winter, he returns to Gressoney every year at the commencement of the chamois season, owning a large tract of hunting ground at the head of the Val de Lys, where he has his shooting lodges in

convenient positions for the long excursions the sport necessitates. No chasseur ever followed the chamois with more untiring energy and keen enthusiasm, returning each time to the mountains with, as he said, a greater relish than ever for their freedom and grandeur; his only regret being to quit them for the city on the approach of winter. Beside a large collection at his residence in Bavaria, he had another at Gressoney, of which we had heard much, and also that it contained the horns, &c., of the bouquetin or ibex. The conversation turned chiefly on that rare animal, and, after the mythical stories we had so often heard from less fortunate chasseurs, it was a pleasure to hear from his own lips the accurate accounts of one who had both seen and shot them in their last haunts on the mountains of Cogne, and also made himself familiar with their habits.

He spoke in such terms of enthusiasm of the unknown regions they frequent in the Vals of Cogne, Grisanche, and Savaranche, the grandeur of the scenery, especially the glaciers, and above all the superb view from a mountain called the Grivola, that before long we were busy over our maps, marking out at his suggestion the best route for exploring it, and Delapierre was called in to our councils on the subject of mules and guides. We found it had long been his wish to penetrate the same district; the mention of the bouquetin at once excited him; and as he had previously expressed his admiration of our mode of travelling, he volunteered to go himself as guide, with his own mule for E. We were only too glad to avail ourselves of his proposal, and plans were quickly settled. The following Friday was fixed for setting out, the Baron furnishing us with full directions, and the necessary introductions to persons at Cogne who had accompanied him in his expeditions, and all we required was fine weather.

The Baron's house on one side of the little Place of St. Jean was remarkable, even where neatness was universal, for

the charming order which pervaded it. His son had only that morning unexpectedly returned from a tour in Norway, where he had travelled in company with a party of our countrymen, with some of whom we were acquainted, and he was afterwards a frequent and agreeable addition to our fireside party during our stay at Gressoney. The collection of horns, some hundreds in number, was admirably arranged round the walls of the upper rooms of the house, each pair mounted on a small wooden scutcheon for the convenience of hanging, with the date and locality inscribed. The most interesting of all were the series of bouquetin horns, four of them of adult males very fine, the largest, a splendid pair, near three feet in length and immensely heavy. The knobs and rings, generally supposed to show their annual growth, were strongly marked, and denoted a buck of some sixteen years, if they could be relied on as a true indication, which Baron Peccoz seemed somewhat to distrust. The disparity is great between the long curved and knotted horns of the male, and the short upright ones of the female, hardly six inches in length. All these bouquetins had been killed by himself on the Cogne range, and we heard many exciting incidents connected with them.

In consequence of the representations of Zumstein in 1821, the bouquetin was protected by Government, and its preservation very laudably encouraged by heavy penalties of fine and imprisonment even for the possession of any part of them, so that to obtain specimens now is not an easy matter. Baron Peccoz, however, had accompanied the Duke of Genoa and his suite, who had visited him at Gressoney, to the mountains of Cogne, where he had been fortunate enough to procure those which graced his collection; and from his well-known character as a true sportsman, and his favour with the Royal Family, he had advantages which very few in Europe could enjoy. His descriptions of the stately animals, and his assurance of the very probable chance there was

that we might obtain a sight of them, made us the more eager for our projected expedition.

The collection of chamois-horns was also very numerous, and forcibly suggested the many daring exploits on crag and glacier, and the days and nights of toil and incessant exposure, endured in gathering them together. An interesting series showed the gradual growth each month in the year, from the birth of the chamois kid up to three years old, when it attains its maturity. A few hours after they are born they have full use of their limbs, and at a day old will take to the rocks with the agility of their dam. The regular increase from the little budding knobs of the first month, up to the full-grown horns of the buck, was very distinctly marked. Those we saw on the Italian side of the Alps were certainly much larger and finer than the generality of the horns we had previously seen in Switzerland. We were presented with one of some noble claws of the lammergeier, or great eagle of the Alps, from birds which had been killed in the Val de Lys, where they are not unfrequent, haunting the Marienhorn, Rothhorn, Grauhaupt, Felik Mountain, and other peaks. They are most destructive to sheep and goats, especially their young; but as very few of either are kept on these mountains, they are not much disturbed, except by an occasional sportsman. Their voracity and digestive powers are almost incredible. Tschudi* gives an instance of one, the stomach of which contained five bullock's ribs two inches thick and from six to nine long, a lump of hair, and the leg of a young goat from the knee to the foot. The bones were perforated by the gastric juice, and partly reduced to powder. In another, killed by Dr. Schinz, were found the large hip-bone of a cow, the skin and forequarters of a chamois, many smaller bones, lumps of hair, and heath-cocks' claws. One almost regrets man was not gifted with such

* Tschudi, 'Nature in the Alps,' 86.

digestion—dyspepsia unknown, Æsculapius would hardly have been deified.

Beside the trophies, the walls were hung with long rows of guns, rifles, horns, game-bags, and all the paraphernalia of the chase, including even a genuine English salmon and trout rod and pannier. Every specimen had been prepared and set up by his own hands, and with the greatest skill and nicety; nothing could surpass the neatness and finish of his preparations. One room was fitted up as a workshop, with a complete set of excellent tools of all kinds, including everything required by a gunsmith, so that he was perfectly independent of the distance from any town, and did all his own repairs, alterations, and adjustments.

We returned to make arrangements for the next day's excursion, the ascent of the Grauhaupt, M. Zumstein having promised to accompany us: all preparations being duly completed, we retired at nine, in order to make a start before daybreak. A knock at the door in the early morning roused us, but with the mortifying announcement—"Trois heures, Monsieur, mais il y a du brouillard." On looking out, the valley was a sea of mist, and there was no alternative but to give up the expedition, for the mist quickly settled down into dense drizzle, and the ascent of the Grauhaupt was out of the question for the day. The preparations for our expedition to the Cogne mountains, and arranging the flowers and specimens collected in the Val de Lys, occupied the morning; after which M. Zumstein arrived with the two pieces broken from the only relics he had left of the original specimens he had detached from the Zumstein Spitze in 1820. To assure me of their identity and genuineness, he had kindly brought the entire specimens, one of mica schist, the other quartz. The only portions which he had given to any one else were, one presented by himself in person to Regnier, Viceroy of Lombardy, at Milan, in 1824; another to his friend M. Gastaldi; and a third to the Academy of Turin.

In spite of several difficulties as to the care of his house, and the reception of travellers who might arrive in his absence, Delapierre was true to his word; his deaf and dumb sister, and his young son Ferdinand, were left in charge; and, on the morning of the 14th of September, we started for Cogne. E. mounted his favourite mule Mora, which at first sight was not a very extraordinary-looking animal, but we trusted implicitly to her owner's high character of her; and right well did she justify it on many a trying occasion afterwards. We carried nothing in the saddle-bags but a careful selection of absolute necessaries, and in light marching order trudged down the road to St. Martin, in the Val d'Aosta, intending to reach Fort Bard for the night.

At the lower extremity of the straggling village of Gressoney were some good substantial houses, one especially attracting us from its neat, bright appearance, remarkable even in Gressoney. The present owner of it had gone into Switzerland as a poor boy, where he had realised a large fortune, and returned to enjoy the results of his successful exertions in his native valley, purchasing this property, and building the house, which looked the model of comfort. Such is the history of almost all the Gressoney families. Being compelled to purchase great part of the necessaries of life and all their luxuries from Turin or the towns of the lower plain, while they have little or no produce—but cheese, and some unimportant articles—to export in exchange, the result is necessarily a regular drain of capital, which never returns. The process would in time be an exhausting one, until the community became utterly impoverished; but the energy and foresight of these worthy descendants of the old Teutonic stock have kept up the habits and traditions of their forefathers who first crossed the Alps to settle here, and maintain a constant and profitable intercourse with the fatherland and a great part of Europe. The young men start early in life to push their fortunes in these countries;

and the name of Gressoneyer is widely known and respected. Either as travelling merchants, or occupied in more settled business pursuits, they expatriate themselves from their native valley, sometimes for the summer, returning again in winter; while others again, and numbers of them married men with families, remain absent for years, until they have realised an independence which enables them to return and settle for the rest of their lives in ease and comfort.

Land is not difficult to purchase at Gressoney, as all the property in the valley is now in the hands of small proprietors. Good land, "pré et champ," may be had for eight sous the square mètre, though what they call "situations d'affection" bring much higher prices; and in their taste in this way they evince much genuine appreciation of the picturesque. Land investments in general pay about 2½ per cent, but the mountain pastures often yield 4 or 5. The lordship of the country was formerly divided between two great seigneurs, the right of the valley belonging to the Count de Challant, the left to the Baron de Vallese, as the Val de Lys is often called; but in the great changes which took place about fifty years ago in the tenure of landed property in Piedmont, when the remnants of the feudal system were abolished, the whole became absolute freehold. Delapierre's property had been purchased and the house built by his father at that period.

The meadows of Gressoney were the richest we saw in any of the Vals of Piedmont; and they were then getting in their second crop of hay, an abundant one. It is free from admixture with all coarse and non-nutritious plants, and is of so excellent a quality that they never give their horses or mules any oats or other food; and they certainly always seemed in first-rate condition. Below Gressoney the alder abounds for some little distance, after which the valley shortly becomes narrow and very wild.

Between the hamlets of Samsil and Trina we passed the

pretty cascade of the Loo or Loobach, and the Fridier torrent, which divides Gressoney from Gaby. At Sertha, below Gaby, the first maize appeared in the curé's garden, which overhung the road, gay with various flowers. The valley was here so contracted that a mere narrow strip of alluvial deposit, skirting the road with a scanty crop of hemp, was the whole extent of the bottom of it. There was an unusual air of prosperity both about the curé's house and the adjoining church which stimulated my curiosity, and, entering by a door next the road, I found a little quadrangle highly decorated with recent fresco paintings. A number of alcoves round it were occupied by 15 "stations," the last of which represented the Trinity crowning the Virgin, the Holy Spirit breathing visibly through a crown held by Our Saviour, and the Almighty represented as in old paintings. In the corner there was a startling representation of the curé rushing out of a door and pointing to the sepulchre. An inscription ostentatiously recorded the fact of the Duke of Genoa, and an illustrious suite, having visited it on the 26th July, 1841. The ambitious plans of the founder of this evident imitation of the Sacra Monte of Varallo on a humble scale had been nipped in the bud; a commencement of stations lay behind unfinished, and the "Via Crucis, Via Salutis" was overgrown with nettles and weeds.

Below Sertha the valley opened out, and we noticed the walnut for the first time in the valley. Women clad in trousers were busy up in the ash-trees, which flourished in the verdant meadows, and their children down below, stripping and gathering up the foliage for winter fodder for the cattle. On a bend of the Lys the white campanile of Issime appeared surmounted by a green cupola, the slope behind it covered with walnut trees. The mountain opposite the village is an extraordinary mass of shattered blocks, among which rises one like a huge needle or tooth towering into the air.

Issime is a quaint old place: the church has some singular

frescoes outside, and the green square in front of it seems evidently arranged for the purpose of holding an out-door assembly. A triple seat with an escutcheon carved on the back is raised on one side, commanding the "Place." There, according to Schott's account, the Counts of the valley or their deputies held their baronial courts; the inhabitants of the Val assembling on the green quadrangle, while the Count occupied the central and higher seat on the "Grafenstuhl," his clerk and fiscal on either side of him. This custom only went out of use half a century ago, and was a singular remnant of the ancient German usage of holding their courts in the open air, continued down from feudal times, and connecting them with the Swiss Cantons, where a similar custom formerly prevailed. The only persons about it, as we passed, were women carrying baskets of rich juicy Aostan peaches, of which we made an abundant lunch for a few sous. Issime is the last German community in the valley.

From here to Fontainemore the valley contracts and the track is steep and rough. About half way between the two, Delapierre, after tying up the mule, led us a few steps down a by path to the small bridge of Guillemort thrown over a profound chasm, at a vast depth in which the Lys is pent up among the rocks, which are of a remarkably high-coloured reddish mica schist. It is an extraordinary and most interesting scene, well worthy of an excursion from Gressoney.

The façade of the church at Fontainemore was decorated with an interesting fresco, the Virgin with the triple crown, and in good mediæval style, whatever its date might be. It bore the name Ant. Fossati di Varallo, which latter place, with the Val Sesia generally, is famous for its painters and artists, who are employed all over the country in these works. Schott makes the observation that all the churches in the valley—for instance, Gressoney la Trinité, St. Grat, Gressoney St. Jean, Sertha, Issime, Gaby, Fontainemore, Liliane, Antey, and Perloz—are built on the right bank, even where the houses

stand wholly on the left. The situation of Fontainemore, where we stopped to replace one of Mora's shoes, is charming, in a nick of the valley, where the Lys is crossed to the left bank by an ancient bridge. The quaint old houses overhung the boulder-bed of the torrent, their open galleries and balconies decorated with pumpkins and large pig-skins of wine hung up to mellow. Over our heads the upper stories were joined by a little street of galleries connecting all the bedrooms together from house to house, a singular and novel arrangement, implying a very good understanding among the people. Little gardens among the rocks were gay with sunflowers, and produced abundant crops of haricots, with other vegetables; the pine had now given way to the Spanish chesnut, which clothed the mountains. We had left the Alpine wildness of the upper valley, and entered the luxuriant regions of Italy again.

The scenery below Fontainemore is magnificent, a constant succession of the richest mountain scenes imaginable, continually increasing in beauty as the path descends the valley. Almost uninterruptedly the traveller is shaded by the rich foliage of chesnut and walnut under which the trickling streams and mossy rocks were mantled with ferns, and quantities of the ivy-shaped leaves of the *Hepatica* and *Cyclamen* showed how beautiful they must be in spring. The sides of the valley are too wild and steep for any cultivation, except where a few houses occupy a narrow terrace in the forest, but what little there is, is remarkable for its richness and the extreme care bestowed on every available nook. In the upper valley, wherever there was a detached rock of large enough size, earth was piled on it, and kept up with a stone wall round the top, on which were grown crops of potatoes, beans, and corn, and the effect was very singular.

At Liliane we came to the first trellised vines, and the valley seemed an endless narrow rift down from Monte Rosa, the towering crests on the opposite side only just emerging

from the dense clothing of forest which invested them. A number of charbonniers were passing up and down, and among them even young girls of twelve or fifteen, carrying with wonderful ease and steadiness a couple of great sacks of charcoal on their backs, down the rough rocky path where the mule was constantly stumbling. While Delapierre was making inquiries for trout at Liliane, we investigated some little holes in the houses, covered with wire netting, which served for shop windows. Among a heterogeneous collection of pottery, thimbles, crucifixes, cotton, pipes, rosaries, and buttons, I picked up a quantity of beautifully regular and lustrous cubes of pyrites.

Liliane was once famed for its gold-mines, which were very rich, but they have long ago been worked out; the population has all but vanished, and a great part of the houses are deserted and in ruins. Local tradition says that in the days of its prosperity, when the pope's receiver came to Liliane for his accustomed share of its rich produce, the lord of the ancient castle impiously caused him to be thrown into the smelting furnace out of the way. The pope's curse avenged the sacrilegious act, and from that day the yield of the mines dwindled away to nothing, and the once flourishing commune was ruined. Certain it is that all recent attempts to reopen the mines have been thoroughly unsuccessful.

The Val d'Aosta soon opened out glorious as ever, and flooded with the afternoon sun. The mouth of the Val de Lys, as we emerged from it, was hardly less striking; the château of St. Martin on a commanding height in the centre, the blue waters of the Lys at an immense depth below us; and the spires and clustering villages of Perloz and Antey, perched at an extraordinary height up the opposite mountain, nestled in a dense mass of foliage.

Coming down on St. Martin after a steep descent, we left Delapierre to get Mora's shoes put right after the clumsy

work of the smith at Fontainemore, and only stopped to examine the singularly elegant but solid Roman bridge. The arch underneath has five ribs of hewn ashlar with four interspaces of rough stone, and the face of it is also alternately banded, which is very effective. The heat of the Val d'Aosta, as we had before felt on similar occasions, was stifling after the fresh pastures of Gressoney, and the cool delicious atmosphere of Monte Rosa; while, on the other hand, the extreme richness and teeming produce of the sunny valley were the more striking. The people were carrying home tempting baskets, as when we had last passed, piled with peaches, figs, and pumpkins, and also were beating the trees and picking up loads of walnuts, of which they pressed us to take whatever we liked, refusing any payment.

At Donnas, while Delapierre was looking after trout, we examined the Roman gate cut out of a slice of rock left on purpose, and pierced with an archway, round the head of which lines are cut, in imitation of the joints of "voussoirs." As we read it, the number on the Roman milestone is xxxvi. The height of the impending precipice out of which the road is cut is immense, and the tumultuous waters of the Doire rush furiously past its base.

At Fort Bard after some inquiries we got a lodging at the "Albergo di Sole," a dirty little inn, with a still more filthy sleeping-room, having apparently never been cleaned for years, but it did very well for one night; and with the help of a slipshod Cinderella, who spoke only an extraordinary jargon of French and Italian, we made such improvement before long, that the padrone, who was from home, must have been astonished at the change effected when he returned. Delapierre set to work with the skill and activity of a courier, foraged for us, cooked the supper, made a savoury omelette, and fried the trout he had luckily secured, as there was nothing else to be had in the padrone's absence but cheese, bread, and oil. He crowned his efforts with a basket

of purple figs, after which it was fixed to start at five, and we retired early. The back walls of the house were the solid rock, and the singular way up stairs was by wide steps cut in it, and jointed into the masonry of the house. The heat was suffocating, but we slept soundly on a shakedown of maize-leaves.

CHAPTER XIV.

VAL DE CHAMPORCHER.—VAL DE COGNE.

Difficult mule ascent — Pont Bosel — Trout-stream — Halt at Champorcher — Royal sportsmen — Châlets of Dondegna — Tradition of Notre Dame de la Neige — Fenêtre de Cogne — Summit — Lammergeiers — Glacier scenes — Châlets of Chavannes — Night descent to Cogne — Dangerous route — Strange quarters — The curé and his brother — Sunday in the mountains — Costumes — Ascent of the Grivola — Magnificent view — Return to Cogne — The bouquetin.

OUR intended start at five o'clock was delayed, as usual, by the laziness of the people at the inn, and we had crossed the Doire, and got among a maze of vineyards, before Delapierre came up with Mora, after making out and paying the bill—a duty which I henceforth resigned into his hands with equal satisfaction and advantage. The path led for some time under continuous bowers of trellised vines, E.'s riding-hat just clearing the pendent bunches. Pumpkins, with their broad orange-flowers and big fruit, ran rampant everywhere; and above the Spanish chesnuts, which shaded the valley, the grandly-serrated peaks of the enclosing ranges stood out gloriously against the intensely blue sky. In the freshness of the early morning all seemed radiant richness and sunshine. The country was as new to Delapierre as to ourselves, and we all entered heartily into that pleasurable feeling which attends an expedition into an unknown region, with a prospect of adventure.

The peasants who met us seemed as astonished at the mule as at ourselves; and from their patois remarks to Delapierre I gathered that the track further on was so bad that it was quite unfit for mules. We soon had a specimen of it on beginning to ascend from the bed of the valley. At

first I hardly imagined it possible that E. could ride up the steep rock, even had her mule been able to keep its footing on the slippery ledges and smooth channels; but Mora triumphed over all difficulties, and at the end of the first hundred feet of ascent had established her character as one of the best mules we had ever seen. With a steadiness and sagacity which were surprising, she poised herself on three legs until a safe footing was found for the fourth, or at a wide reach planted her fore-feet, firmly drawing up her body as if holding by hands—or when she slipped bodily backwards on some smooth slab, took it coolly without any scrambling or stumbling, until she reached some projecting ledge to stop her way. In this manner E. got safely over the worst part of the climb, though it was no easy matter to keep her seat, and throw her weight well forward at the same time.

It was market-day at Fort Bard, and many peasants met us, descending to make their purchases, or bringing down the produce of the upper Val, which was little else than thick planks cut out of the native pine, and each of the women carried two or three on their heads, steadying themselves on the slippery rocks with their bare feet. At the sight of E. and Mora they all stopped in turn with unfeigned surprise, as a mule is almost unknown in the Val Champorcher, everything being carried up and down on their own heads or backs. More than once a group sat down to watch a special scramble up some perilous place, and heartily applauded after a successful struggle.

Many points of the scenery during the morning's ascent were striking, especially the view of Pont Bosel over the Champorcher torrent, in a basin at the head of the first reach of the valley, the picturesque bridge and foaming waters framed among the rich wood. Here the track, which was more practicable, takes a turn to the right, and skirts the torrent, which was one of the most perfect trout streams I

ever saw, with deep pools, short falls, rapids, and tails of swift streams, the very colour for fishing, without a tinge of glacier-water. At the first huts we came to, Delapierre made inquiries, and found it abounded with trout, which, according to accounts, were plentiful, of the weight of 2 or 3 lbs.; but the natives were too lazy to fish for them. I greatly regretted having left my rod behind at Gressoney; and Delapierre was no less mortified than myself at seeing the trout rise freely in the river without being able to get any of them.

An hour above Pont Bosel is another sudden turn in the track, where it is carried abruptly round a jutting angle of the rock, which here deeply overhangs the valley. A rude staircase was cut in the rock, and only a few crazy rails, or tops of pines, rotted by exposure, offered imaginary protection from the profound precipice. E. and Mora came very cautiously round and down the perilous angle, and gained a better path continuing to Champorcher. While they went on to the hamlet by a wide détour—which keeps the church and castle, on an eminence, so long in view that they never seem nearer—I stopped to sketch the singular rock, behind which the morning sun was streaming up the valley. When I rejoined the party I found them seated on the stones outside one of the humble houses, which were crowded together in a little close street, as if for warmth, the interior having offered no temptation to remain within. Food was scarce—only black bread and eggs were to be had; but as we never tired of them, we made a hearty lunch "al fresco," while Mora, picketed to a stone, was eating hay with an undivided attention and steady voracity which evinced no small mountain experience.

We reached Champorcher at 10 A.M., in 3¼ hours fr Fort Bard, 4 hours having been stated as the estimated tance. The dilapidated tower or keep is the only part wh remains of the old castle of the Challants, and, with the sp

the little church close to it, has a very picturesque appearance at a distance. Until recently the village of Champorcher paid a homage of 120 francs annually to the Countess of Challant, as their seigneur. Lofty mountains of varied tints of red, purple, and ashen-grey environed the little basin of green meadows, with here and there a few châlets. On the slopes, facing the south, we were surprised to see the corn cut, the ground tilled and resown, and the young crops already springing, at an elevation where we could hardly have expected to find any of the cereals. The situation was evidently unusually favourable, from its concentrating all the rays of the sun.

A little before 12 we again started; the inmates of every scattered cottage came out, and the peasants in the pastures tending their cows left their charges to see the unusual sight of a mule, and the still rarer one of an English lady on an English side-saddle. The king of Dahomey, riding through the quiet streets of one of our country towns, would hardly have excited more astonishment than our appearance did in this unsophisticated valley.

A rapid ascent up to the higher meadows, with beautiful views of the Val de Champorcher and its softly-tinted mountains, brought us to the outlet from the head of the valley by the torrent of the Champorcher, entering a chasm under the cool shade of the rocks and overhanging larches. The most difficult and dangerous climb for the mule here commenced, up a tremendously steep face, by rough steps cut in the shaly rock—occasionally a mere narrow ledge scarped on it, and even that in several places all but effaced. With a precipitous fall of many hundred feet below the brink, and nothing to arrest one in case of a false step, as the track got worse and more precarious, I wished E. to dismount; but it was too late, there was no room to do so; and I looked on with no little anxiety, while Mora, with marvellous sureness and sagacity, carried her across places which had barely

afforded me foothold, steadying herself on the smallest inequalities, and holding on to the ledge with scarce a slip. A woman, who was tending cows below, seemed horror-struck at the attempt, clasping her hands, and lamenting E.'s fate!

The track had been temporarily rendered passable for a visit which the King, with the Duke of Genoa, had made to Cogne on a hunting expedition the year before, on which occasion they carried with them beds, cooks, 20 mules, 18 cows, and about 50 retainers. The King, who is an enthusiastic sportsman, glad to escape, whenever he can, from state affairs and court ceremonials, to the more congenial sports of the field, was said to have been delighted with the grand mountains of Cogne and their noble game. He stayed four days, and the Duke fifteen, hunting the bouquetin and chamois; and here, as everywhere in Piedmont, the Duke was as much regretted as he had been universally beloved. Since their visit the path had crumbled away, and the last spring's avalanches had nearly destroyed great part of it. At length it was safely passed, and we gained a pretty glade, on which were fine clumps of the tall *Gentiana asclepiadea*, with their large heads of pale ultramarine flowers. Higher still we emerged on a wide-spreading, undulating pasture-ground, carpeted with the most exquisite greensward, especially striking where the emerald verdure contrasted with a chaos of wild blocks on the right, the shivered fragments of which lay strewn round the base of the singularly-wild Becca de Ratti, a barren, scathed obelisk, which almost overhung us. A number of sunny châlets were grouped together on one part of these Alps; and, being considerably in advance of the rest of the party, I examined them as a resting-place on another visit, and came to the conclusion that a bed in the hay there would be far preferable to the miserable "Sole" at Fort Bard. It would, moreover, make a good division of the long day's work from the latter to Cogne, which is too much

for a lady at one stretch, unless in summer, when there is long daylight.

The views on all sides were magnificent, especially that of the distant ranges behind us, pyramid piled above pyramid in continuous tiers of the richest colouring. That on our left, and to the south, separated us from the Val Soanna; one of its eminences (the Pragelas) was a strange rounded summit, covered with olive-tinted verdure, the torrent foaming in successive cascades at its dark foot. Behind it, and over the higher peak, lies the way into the Val Soanna. Mont Arietta, the highest point of the ridge, was not visible; but on a lofty shelf under it a glacier came in sight, which our guide called the Ruise de Bonch—"ruise" being the patois for glacier. A remarkable rounded hill below it seemed to indicate, from its form and position, that the glacier had once extended as far. An extraordinary and beautiful effect was produced by the afternoon sun, which just cleared the ridge, its rays slanting down the slope over a thick bed of silvery-grey shrubs, and through the tall bare poles of the larches which covered it, their shadows doubling their apparent height. The milk-white torrent thundering down from the glacier, and flashing in the sun, joined by another from the other side, foamed between the enormous rocks in which they were pent up.

While proceeding along the beautiful greensward from the châlets, I spied an immense crop of mushrooms, growing in a grassy hollow, the first time we had met with them in Piedmont. On my setting busily to work to gather them, Delapierre and the guide strongly protested that they were highly poisonous; no one in the country would touch them, though many other fungi were commonly eaten, and they tried hard to dissuade us from poisoning ourselves. There they were, however, the genuine *Agaricus campestris*, beyond all possibility of mistake, with smooth, snow-white pileus, and fleshy-pink gills showing through the half-split

ring, and the variety *edulis*, the most sapid of all its many-varying forms. Delapierre was never above conviction; and, after a short lecture on fungi in general, and the *campestris* in particular, we all set to work and filled an extempore bag with a great pile of the best and freshest, hanging it on the pommel of the saddle.

A short descent to the stream brought us to the châlets of Dondegna, the last in the Val. A warm nook in an angle of the rocks, sheltered both from the cold wind and the glare of the sun, with a deliciously-clear little burn in front of the patch of turf, made an excellent resting-place for our dinner at half-past two. The staple eggs and rye-bread were supplemented by figs and peaches from the Val d'Aosta, which Delapierre had somehow managed to carry so far uninjured. We were quietly discussing them when, to our dismay, we saw Mora, who was picketed at a little distance, deliberately stretch out her legs, lie down on her side, and begin an apparently most enjoyable roll, with bags, saddle, and all on her back. The safety of all our belongings was imperilled, and an accident to the crutch would have been irreparable here; but the scene was irresistibly ludicrous. Delapierre rushed up and administered kick after kick before she desisted, and sat on her haunches, looking drolly at him, with our baggage in the direst confusion. Fortunately little damage was done, and the thermometer was safe; and finding a fire in one of the châlets, by which an old woman was crooning, I boiled water, and noted its temperature, to her great wonderment at the unexpected apparition. The external temperature was 24° Cent.; that of the boiling point, 92°·5.

Our lazy guide asked leave here to exchange with a shepherd, who wished to go over to Cogne, and we gladly assented, as his substitute was a good-looking lusty fellow, and well acquainted with every part of the pass. The way lay over rolling hills of coarse grass, embedded among lofty

ranges of magnificent mountains. Crossing the stream more than once, hill succeeded hill, each barer and more desolate than the last, with rocky knolls, and occasional bright slopes of greensward, left by the retreating snow—the only relief to the wild and mournfully dreary scene, except a few Alpine flowers, and brilliant patches of blue gentians. Near the middle of a wide track of swampy moorland I came on a little cross about two feet high, and while I was wondering whose death it recorded in the usual Alpine fashion, the others came up, and the shepherd was just narrating the marvellous tradition connected with it. An image of the Madonna had been discovered at the very spot marked by the cross, where it was supposed no human hand could have placed it. The heaven-sent effigy was carried down to Champorcher, as a mysterious and highly prized relic; but refused to stay there, vanishing the very next day, and not long after was found on the original spot. A second attempt met of course with the same results, and, ultimately, a lonely little chapel of rude masonry was built hard by on the edge of one of several dreary little lakes, fed by the melting snow and glacier. Here the Madonna was placed, and remains contented; and a procession of all the natives of the Val repairs to it once a year, to commemorate the event and pay homage at the miraculous shrine of "Notre Dame de la Neige." The King on his visit had left 1000 francs for services, and, however questionable such a gift may appear to Protestants, it was not I confess without some pleasurable feelings that one heard, in this lonely Alpine moor, of the sovereign of Piedmont penetrating the wildest mountain fastnesses of his dominions, and identifying himself with their romantic legends and religious interests.

The route over this grandly desolate scene was not easy to find, from the similarity of the high ground, until the summit of the Col came in view; and our guide was indispensable. At one point we were fairly brought to a halt, to discover

how Mora was to be got up an ascent of rock, under an overhanging bed of snow, so steep that the guide declared it impracticable, and urged us to make a détour. But this would have lost us much time, and Delapierre had implicit faith in Mora's capabilities under almost any difficulties. Finding from the guide that cows—the Piedmont breed of which are excellent mountaineers—had been known to scramble up, he declared his rule to be, "Où les vaches passent, Mora passe aussi," which often diverted us afterwards in similar positions. The short parley over, E. dismounted. We crossed the torrent, climbed up, and sitting down on a stone watched the result. The guide took the bridle, at which he tugged unmercifully, while Delapierre held on by the tail to steady her, and between them Mora reached the top bravely, amid our loud applause.

Being anxious to obtain as much time as possible on the summit, I pushed on in advance, the shepherd volunteering to accompany me; however, I soon outwalked him, being in excellent condition and wind; and he waited for the mule, whose slower pace suited him better. The lazy fellow's complimentary remarks on rejoining them were, to E.'s amusement,—"Il marche bien.—Il marche comme le diable! —Oui, vraiment, il est le diable!!"

The Col was now in view, a narrow nick in the top of the ridge which closed the head of the valley, marked by a cairn and pole, with a wide bed of snow. The face appeared at a little distance a nearly vertical mass of rocks, with no discernible path up it, but, on reaching it, part of the crumbling zigzag made the previous season for the King still remained, and after a rapid and difficult ascent up loose stones, and black decomposed shale, I stood on the summit of the Col, the others being more than a mile behind, and looking like little specks below me. The wind which poured through the narrow nick was so intensely keen, that heated as I was with the rapid ascent I had to shelter myself for some minutes

behind the rocks, before I dared face it. While resting here I heard a rush overhead, and, looking up, an immense lammergeier swept through the narrow cleft, his enormous outspread wings, which seemed to be ten or twelve feet wide, only a few yards above me, and the peculiar noise they made in his swooping flight was most startling. The instant he caught sight of me, he made a sudden wheel, and turned round again to reconnoitre, as if half meditating an attack; which, if the country traditions be reliable, was not altogether improbable. Tschudi says* "that the lammergeier has not unfrequently practised the manœuvre of whirling round huntsmen, and trying to frighten them over the edge of hazardous positions. Those who have been thus surprised have declared that the noise, together with the strength and rapid motion of the enormous wings, have exerted a certain magical and almost irresistible influence over them." He relates the wonderful escape of a Sardinian who attempted to rifle a lammergeier's nest in the mountains of Eglesias, accompanied by his two brothers, who let him down by a rope. Suspended over the tremendous abyss, he had taken four eagles out of the nest, when the parent birds fell upon him simultaneously like furies. He kept them off by his sabre, which he swung incessantly over his head, when suddenly the rope began to shake violently; he looked up, and to his horror discovered that, in the heat of defending himself, he had cut through three-fourths of its thickness. The remaining threads might snap at any moment, and the slightest movement on his part might precipitate him into the depths below. Slowly and carefully his companions drew him up, and he was safe. His hair, which was raven black (his age was about twenty-two), had turned white, it was said, in that half-hour.

When at length I was cool enough to withstand the bitter wind, the view which met me on looking down into the valley

* Nature in the Alps, p. 87.

of Cogne was truly magnificent. The position on the sharp edge of the crest, between the two long valleys, was most striking. That of Cogne lay dark and gloomy at a tremendous depth below; while behind, I looked back on the dreary lake and lonely little chapel of "Notre Dame de la Neige," an appropriate feature in the solemn scene. The glaring rays of the declining sun lit up a grand succession of sublime ranges of Alps, of which I made out some six or seven, one beyond the other; and conspicuous above all was the beautiful Grivola with its singularly defined and sharp edge of spotless snow, to make a near acquaintance with which was the chief object of our expedition. Among these jagged peaks and icy pyramids lay fields of glaciers of wondrous extent. An enormous one, the Glacier of Cogne, stretched up to Mont Arietta, on our left, and was of a most remarkable character. Its length appeared interminable. All along its lower edge, where it descended into the valley, was a continuous frontal moraine, while the surface for many thousands of acres was unbroken by icebergs, only rippled with gentle wavy crevasses, as if slumbering in deep repose. Over the crest of this our shepherd pointed out the Col de Cogne, a glacier pass into the Val d'Orca, and another pass, on the N. side, the Col de Ponton, leads over into the Val Fenis to Aosta. Behind us, far beyond the long deep valley we had been traversing all day, the singular ranges above the Val Challant, streaked with snow and bathed in blue and violet mist, were topped by the loftier icy crests rising behind in the distance. At this exposed elevation, on the edge of the snow, some beautiful flowering patches flourished of *Ranunculus glacialis*, auriculas, forget-me-nots, and gentians.

When all had arrived on the Col we consulted as to our resting-place, for the day was closing, and the clouds already beginning to creep up from the deep valley at our feet. Our shepherd guide said we could reach Cogne in two and a

half hours, and as E. declared herself quite ready for more than that distance, we all agreed to try and get there for the night. While handing round to each a draught of Cognac and snow, as there was no water, the moisture of the light clouds, which swept on the icy wind through the Col, froze in a thick coat on the silver cup, and our lips stuck to the metal, nearly taking the skin off.

The cold was too intense for us to stay long, splendid as was the view, and we prepared to descend, E. having already dismounted. The first declivity was so steep that when at the foot of it, and looking up, it seemed impossible that any mule could have scrambled down. Our attention was arrested again and again by the grand Glacier of Cogne on our left. At half past six we had dropped down to the châlets of Chavannes, a little group of stone huts on exquisitely green Alpine pastures, which I never saw surpassed in richness. Our guide, who belonged to them, offered us a bed on the hay, and I went in to look at the only hut then inhabited. It was dark, forlorn, and very filthy; and as there seemed to be no necessity for stopping, we preferred trying to get down to Cogne, and the more so as the next day was Sunday. In the hut two men were preparing the long brown horseradish-like roots of the gentian (*G. asclepiadea*), for the manufacture of "genzana," a strongly bitter cordial distilled at Cogne and Aosta, and in very high repute during the time of cholera, as a stomachic and preventive. The fresh root we found intensely bitter.

The shepherd was induced for a trifling consideration to guide us down to Cogne, and it was most fortunate that he did. Twilight deepened as we descended pasture after pasture, more lonely looking in their isolation than the rugged mountains which overhung them. Presently night stole on—soon the stars came out, Jupiter rose over the cold deathlike ice masses of the great glaciers of Cogne, and ere long we were all descending in perfect silence, each occupied

with the perilous work we had to do, where a false step would often have been fatal.

The descent, after traversing the undulating pastures of Chavannes, was steep and precipitous enough in the daytime; by starlight every danger seemed magnified; the yawning gulf below us was black as night, and at a depth of many hundred feet below—which was the more awful and profound in the darkness—a faint white line here and there marked the torrent, the roar of which reached us at intervals. The narrow path, scarcely discernible, and scarped on the mountain side, skirted the corners of deep precipices, and was barely wide enough for two persons in daylight. With our alpenstocks in our left hands, we felt the way in advance, and they often met with no alighting place, showing how near we were to the edge. Down this rapid descent, undefended by any wall, on the side of the precipice, we stumbled over loose masses of stone, and down rough channelled rocks where it was impossible to see our footing. Every now and then one or other of us made a rough slip, or came with startling jar against some obstacle, or splashed in strange uncertainty through streams at the foot of roaring cascades; and at the same time at a pace which would have been impossible but for the shepherd, who went in advance, and picked out the path with wonderful sagacity, and without a moment's hesitation. Mora followed capitally with Delapierre, and I brought up the rear: E. being placed between us for safety. We were often necessarily widely separated, and at one of the steepest and most dangerous points she fell and disappeared from my sight under the rocks. On hastening forward I found that most providentially she had just escaped the edge, and was not hurt, so that after recovering from the shake she was able to go on again in a few minutes.

All were for most of the way as silent as the night itself, but occasionally our guide roused the echoes with a startling whoop, the elfin-like cadences of which rang

through the mountains. At the châlets of Gollie he was answered by another at a distance—a single light showed for a few minutes, and again all was still and lonely. Jupiter shone with a brilliancy which I had never before observed, and, when he was visible above the opposite ranges, quite lighted up our path, casting a sensible shadow—leaving us in entire darkness when he dipped behind some black frowning peak. His light was of most essential service to us, and but for it we should probably not have got down the pass that night. In more than one instance it saved us from serious mishaps, and we have ever since regarded the bright planet with feelings of especial gratitude. Many glow-worms enlivened the way with their cool emerald-green lights, and, anxious as we were to reach Cogne, we all frequently stopped to admire them.

At length we got down to the larch forest. An indistinct glen opened up to the left, at the head of which a glacier glimmered in the pale starlight, which I concluded from my remembrance of Wörl's map to be that at the head of the Val Valeiglie. Shortly afterwards, the stumbling and uncertainty of the steep track was exchanged for the dusky indistinct ground at the bottom of the valley, where, after tripping over watercourses, we crossed the wide torrent-bed by two wooden bridges, beyond the huts of Champlong. A better path followed the left bank of the stream down to Cogne. We stopped at some piles of stone by the roadside, and the guide handing a piece to me I immediately recognised it in the dark, from its great weight, as the famous iron ore of the Val de Cogne. Continuing along the foaming river, dimly visible below us, we at length perceived some white square masses and a tower a little in advance, which proved, to our great satisfaction, to be Cogne, as for the last three hours every step had required such caution and circumspection, especially at the rapid pace we had descended, that our eyes were aching with the constant straining in the dark.

Without entering the village, we turned to the left on its outskirts, and arrived at a building with two large barn-doors, which we were told were the quarters recommended by Baron Peccoz. The place looked as unpromising as could be imagined. After thundering at the door for some time not a soul answered, and a fresh attack with my hammer was equally unsuccessful. With the aid of a fusee I found it was past ten o'clock, when the guide came to say that he had clambered up to a window at the back, and roused the people. It was a weary time before the padrone was heard fumbling at the other side of the door, and let us and the mule in. Instead of an inn, we found ourselves in an agricultural lumber-room, not a vestige of furniture, and mother earth the floor—sheaves of corn, bundles of hay, antiquated implements, harness, yokes, &c., almost filled it. At the further end, a low doorway opened into a dusky little cell, which the still smouldering embers, and dirty pans, with a rough seat or two, showed to be the kitchen and living apartment. We took possession of it without ceremony; but a sleeping-room seemed out of the question, until the dilatory host, who was still half-asleep, and bewildered at our arrival, brought a huge key, and took us up a ladder into the hay-loft, where we began to imagine we were to rest for the night, and felt quite resigned to a hay-bed again.

The large key, however, was applied to a side-door up a few more rounds of a ladder, which revealed a room like a pigeon-loft, with a couple of pallet-beds, a deal table, and benches. It was dirty and close—but so much better than we had expected from first appearances, that we were quite content with it. As soon as we had brought in the saddle and baggage, Delapierre and myself set to work to make the place more comfortable and get something to eat. We had not been in long before every individual in the house had half-dressed, and was in the room, pretending to be busy, but in reality merely satisfying their curiosity,

for as far as their efforts were concerned we should have got nothing. But Delapierre made a capital omelette, and getting him to bring one of the doubtful-looking pans from below, we cleansed it, and I showed him how to prepare the mushrooms gathered in the morning. Picking them carefully over, they were seasoned with pepper and salt from our stores; plenty of butter and cream added—the only good things to be had, and abundant; and a large panful was sent down to stew by the fire. Delapierre himself certainly seemed very distrustful, but the people of the house were horrified at our rashness, and predicted certain death, with grave signs and shakes of the head. They made a sumptuous addition to the omelette, which was the only food procurable beside black bread.

The floor was filthy beyond all precedent, abounding in entomological life, and I took my usual precaution in such doubtful quarters of sleeping in shirt and trowsers, tying the latter round the ankle with my boot-laces, and my wrists with handkerchiefs, effectually puzzling the fleas, swarms of which had already begun vigorous assaults during supper, showing what we might expect. Still we were only too thankful after the last few perilous hours to find ourselves in any bed, having been on foot continuously since 5 A.M.

Daylight showed the squalid dinginess of the room which the light of our wax candles had but dimly disclosed the night before, and we were glad to leave it while Delapierre set to work to make it a little more habitable. He was evidently relieved to find us perfectly well after our hearty supper of mushrooms, and the people were astonished to find us alive. But for our indefatigable guide, we never could have got any water for washing, and even then a bathe in the cold torrent was indispensable before I felt quite refreshed. Descending by the hay-loft and ladder into the barn-like room, it seemed even more singular than the night before, and in the little den at the end I found Delapierre preparing something

for breakfast, in a dense reeking smoke. Outside there was a delicious and exhilarating freshness in the air, and the soothing Sunday chime of the bells sounded from the campaniles down the valley. From a little knoll of rocks and pines, to our extreme delight, we once more got an unexpected distant view of Mont Blanc—at the head of a direct vista of mountains from Cogne to the head of the valley of Courmayeur—glistening in the morning sun like burnished silver. Directly overhanging us on the west was a lofty ragged crest and clustered peak, a part of the Grivola; and opposite, and to the north, a lofty series of mountains shut us out from the Val d'Aosta. On the face of one lower summit on this side, apparently calcareous, were the "filons" or iron-mines. The people were all anxious for us to go and visit them, not seeming in the least to understand our motive for resting on Sunday.

After the hour of mass was over, and the peasants had returned home, we sallied out for a walk to find some quiet place, in accordance with our usual custom. The curé—who had evidently heard of our arrival, and had come on purpose—met us, with his brother, a great chasseur, recommended as guide by Baron Peccoz. With them was another priest, of most agreeable and superior manners, who proved to be Professor Cavagnet of Aosta, and his acquaintance we shall long remember with pleasure. The curé was himself a great chasseur, and, like his brother, Glarey by name, whom Delapierre had engaged for the next day's expedition, he knew every haunt of chamois and bouquetin in the neighbouring mountains, speaking with enthusiasm of the Grivola. After a little conversation, we left the party stretched on the greensward round a flask of wine and a huge antique glass bottle of water—a group for a Teniers.

We took the direction up the beautiful wild glen above Cogne, the Val Valnobe, the head of which is filled up by the glacier-flows of Vermiane from the ice-fields of the Cogne range. Following the torrent alternately over its

wide gravel bed, and short green turf, beautifully studded with picturesque clumps of pines, and past several little hamlets, we reached a charming spot near enough to the foot of the glacier to command a full view of its moraines and general structure. The grassy plots which checquered the rock-strewn bottom of the glen were interspersed with extraordinarily large blocks of gneiss, apparently deposited by an ancient extension of the glacier, and around and under the shade of their bases were beautiful little tufts of clustering ferns, chiefly *Polypodium phegopteris*. Choosing a romantic position among them on the broad top of an enormous moss-grown slab, we read the afternoon service, in a temple truly "not made with hands." The towering pines rising around, from among their rocky bases, like dark clustered pillars backed by the blue ice-walls of the glacier, were overarched by the cloudless vault of heaven, into which the loftiest snow-peak pierced as a spire. The glacier-torrent, like a distant organ, thundered a deep diapason, and over all else reigned a solemn stillness unbroken by any living being but ourselves. There are certain moments of attuned feeling in perfect harmony with surrounding scenes, which, though perhaps without any specially assignable cause, leave an imperishable impression on the mind. Amid the solemn grandeur around us that afternoon, the eternal truths of Revelation seemed invested with a vivid distinctness almost startling, in the presence of those wonderful proofs of Omnipotent agency—from the everlasting hills of incalculable age and feebly comprehended formation, down to the tiny fern which nestled at the glacier-foot, perfecting its minute seeds after its kind, in obedience to the same Divine will that upreared the icy peak into mid heavens. All suggested how inconceivably immeasurable are the power and wisdom of God the Creator; how little, and yet how cared for, man the creature—his origin the dust of the earth, his wondrous destiny immortality!

We remained until long after the shadows of the western ridge had crept up to the summit of the eastern side, and after the heat of the day's sun we began to feel the unchecked influence of the near proximity of the ice. The walk, which in the morning had been close and sultry, was now fresh and exhilarating as we returned to Cogne. Descending we were struck with the Sunday costume of the women, which was remarkable for the sort of large bib and apron of spotless bleached hemp with wide sleeves, in contrast with a red boddice with straps like braces, and blue or brown woollen petticoat. Some wore a brown woollen jacket instead of the great pinafore. The women were remarkably light-haired. The men wore very short-tailed brown coats and breeches, with plum-coloured gaiters, and high-crowned banditti-looking hats. Some women coming up the mountain with baskets full of cranberries good-naturedly pressed them on our acceptance. On returning we found the loft wonderfully improved by Delapierre's care; but the people, who would neither do anything themselves nor help him, he stigmatised as regular Russians, the popular epithet in Piedmont at that time to express a thorough savage! To his indefatigable efforts we were indebted for a dinner, the staple of which was still stewed mushrooms, certainly a most nutritious food for healthy stomachs, containing as they do, among other alimentary substances such as albumen, fat, and saccharine, so large a proportion of osmazome, the savoury principle of all animal food and gravy. Delapierre even now pronounced them delicious, being delighted to find so excellent a dish made out of what he, and all the natives, had hitherto considered poisonous, and wondered he could ever have been so prejudiced. It is remarkable that in Rome, where numerous species of fungi and boleti are sold and consumed in immense quantities—of every colour, green, orange, blue, and yellow, and to such an extent that a regular inspector of these delicacies is appointed—the *Agaricus*

campestris, or common mushroom, is by special regulation prohibited to be sold, and, when detected, thrown into the Tiber.

As on the night before, the whole household and their visitors managed successively to have a good stare at us, and occasionally three or four came in at a time, carrying a plate of bread, water, or some little article. We had afterwards to pay about twice the proper charge for our hospitable reception. Delapierre having found out during the day a better lodging, we at once determined to move there after our descent from the Grivola, making the best of it in the mean time.

The golden sunset, with the great height of a few "cirri" which caught the last tints of ruddy light, had augured a fine day, so that, on rising at four next morning eager to commence our expedition to the Grivola, we were mortified to hear from Delapierre the announcement well known to all Alpine travellers, "Il y a beaucoup de brouillard," and, on looking out, found the valley enveloped in heavy mist. I, however, felt so confident of its lifting, and of a fine day ultimately, that everything was quickly got ready for a start, all but Glarey the guide, who arrived half an hour late, with a great umbrella and a rifle on his shoulder, and wasted another half-hour in getting his breakfast. He predicted rain, but, telling him it was time enough to turn back when rain began, we finally started at six. The baggage was deposited at our new quarters, which were of a totally different character; and while this was being arranged, I got some stout-headed nails put into my boots at an odd little den, by advice which I afterwards appreciated—the "clappey" having been rightly represented as "un peu mauvais."

The clouds whirled about our heads, promising a break, and before reaching a new bridge which leads to Crétaz, the beams of the rising sun struggled through the mist, which began rapidly to roll up the mountains, and soon Mont

Blanc appeared in the distance. Inspirited by the prospect of a fine day rewarding our perseverance, we crossed a few meadows to the left of the bridge, and for two hours ascended continuously through a vast forest of pine and larch of great age and beauty, hoary with long pendent lichens, and often exquisitely grouped, until we emerged on open pasturage. To our great gratification the sky, the whole of the peaks around us, and the valley below were without a cloud. While we were waiting at the cheese châlet of the pasturage for a supply of salt being ground fine in the quern, a woman who came out greatly amused us all by her compassionate condolences at E.'s fate, being dragged up to such savage heights by a relentless husband. She was hardly civil to myself, and, on parting, in the most dolorous tone exclaimed, "Pauvre femme!" E. laughingly suggested she ought rather to say, "Pauvre mulet!"—as she herself was happy enough. To convince her was impossible, and as we went on, laughing heartily, we saw the good soul watching both with unfeigned pity till we again plunged into the forest.

Glarey was now in better heart; the evident effects of a previous day's indulgence had gone off, and he predicted our arrival at the summit not long after mid-day. The track through the forest was so unused that we had to draw aside the obstructing branches for E. to pass through or rather under them; until at the edge of it we looked down into a deep and vast glen below us, from which, on the opposite side, the tremendous precipices and crags of the Grivola rose ruggedly into the sky. The highest point visible was a cluster of shivered aiguilles, seemingly inaccessible, and their fragments strewed the glen in enormous heaps. We sat down on the steep slope among the rhododendron bushes, where we could be unobserved, and Glarey and I for some time searched each crag and shelf with our telescopes for bouquetins or chamois, but without success. He pointed out a spot below, of the brightest greensward near a little spring,

where in the early part of the season he had lain in wait, and killed two buck bouquetins, right and left. His description of them was eloquently enthusiastic, and he spoke with the ardour of a chasseur of their noble port, the stateliness with which they carry their splendid horns, and the depth of their chests. Nor was the juicy delicacy of their flesh forgotten, which, instead of the dark colour of the chamois, is said to be more like veal.

We had now left the Val de Cogne far below us, and its houses and church were dwindling to specks. At this point was a beautiful view of the Grande Jorasse, in the Mont Blanc range, through the opening at the foot of the valley; the Monarch himself being concealed behind the jutting precipices of the Grivola. Descending into the glen by a path or watercourse, so steep and stony for a mule that E. dismounted, we again came on the tracks of cattle at the bottom of it, leading up to the higher pastures, and had a comparatively easy ascent until we had passed the last little group of tenantless hovels, where Baron Peccoz had taken up his quarters on his late expedition. The enormous and precipitous mass of the Grivola was immediately in front, overhanging us with its colossal cliffs, and under them we continued the ascent up steep and rocky ground, Delapierre pushing on his mule to the utmost.

At last it became utterly impracticable even for Mora, and E. found it very difficult to sit her, as she scrambled and plunged among the rocks; so we picketed her on a little open platform, where there was enough rough herbage to amuse her until our return. Making a cache of the wine and chief part of the provisions, the saddle was placed by Delapierre in a nick of the rocks, and a bottle of Turin "rhum," which he had brought with him as a special reserve, was concealed under it in the plaids. Though no human being but ourselves was ever likely to come near the place, he wisely would not trust our guide's weak point with any needless

temptation. Glarey took his time, making a point of eating and drinking heartily before commencing the last difficult ascent, and it was evidently no use hurrying him, so I carefully surveyed the ridge and the possible points of access, through the telescope. What at a distance had appeared to present no very great obstacles I now found to be a formidable undertaking. From the rugged pinnacles already described, which towered above the perpendicular precipices, where the mountain mass seemed on the right to plunge into the distant valley, stretched a long serrated ridge up to a snow-covered peak called the Tête Noire, at the highest point of the glen. The beetling crags looked ready to fall on us, shattered as they were, the whole of the ascent underneath being over what they call in the patois "clappey," a wild confusion of rocks strewn often many yards deep in fragments of every size, split off from above, and yearly augmented by the effects of alternate frost and thaw.

There appeared as far as I could see and hear to be but three points by which the summit was attainable. The first was directly above our halting place, by a steep pitch of vast height, and so sharply inclined that a false step at any point would have inevitably precipitated one from top to bottom, and thence over the edge of the precipice. Glarey said this was sometimes climbed, but gave his opinion against it; which I the more readily agreed to, as we had left the glacier cords below, which would have ensured E.'s safety, as well as our own. For a man the difficulty would not have been great, but a lady's dress, however well managed, is a serious obstacle in such extremely steep ascents, from the constant danger of treading on it, and we at once gave up this route. When Glarey was ready we continued the ascent under the great precipice, on which we heard the ptarmigan calling overhead, the only sound except the occasional fall of fragments of stone. A solitary pair or two of a pretty lark-like bird with red wings and a greyish dove-coloured neck,

flitted among the rocks, but they were so shy that I was unable to get near one to ascertain the species.

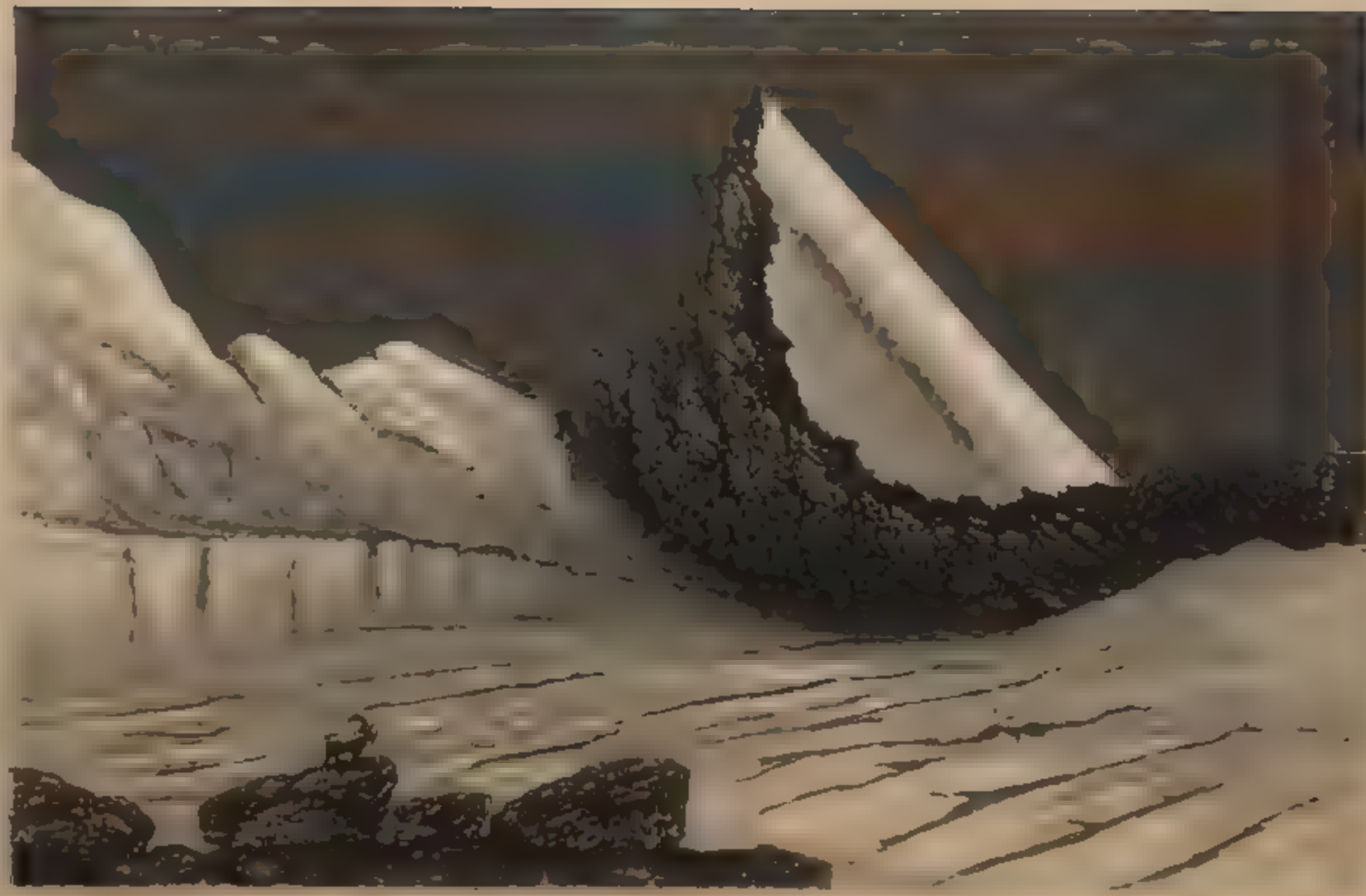
After half an hour's rough scrambling, Glarey, who was behind, cried halt, and that we had just passed the only other route by which we could climb the formidable face. He pointed out a narrow little shelf or ledge, running up a fearful-looking crag. The ridge on which we were then standing was narrow and dangerous enough for E. to traverse; there was not room to sit; and though she never suffered from nervousness on any occasion, she declared that for once it made her dizzy to look down on the mule now far beneath us. The track proposed by Glarey appeared impracticable for her, but I first tried it for some distance with Delapierre, when I found it so perilous that I was glad to get safely down the narrow slippery ledge, off which the wall of rock threatened to thrust one over the deep precipice. At some points there was barely space for the feet. When we got back, Glarey said there was no other way, and we must give it up. But I had clearly seen that, ascending the Tête Noire, a bare mountain to the south, the precipice gradually diminished in height, as it trended towards it. The way appeared to be over "clappey," and not more difficult than the rocks we had been for the last hour surmounting. I declared my intention of trying this route, and we accordingly made the attempt, but on advancing some little distance I was perfectly astonished to find how entirely I had underestimated the apparent distance, and the enormous scale of the rocks.

The only accessible path was close under the precipice, but even this was not safe, for, as the sun thawed the frozen cliffs, large fragments of stone, slates, and débris, were continually clattering all round us; fortunately no one was injured. But when this was passed, we had ultimately to take to the steep pile of rocks, in which the precipice terminated, and which was really formidable, insignificant as it had seemed from the distance. Delapierre and myself assisted

E. up, and even then it required every exertion on her part to overcome the difficulties. It was an immense heap of rocks, broken up and piled one above another, thousands of tons in weight, in the wildest confusion. Sometimes we crept up them and drew E. after us; others we scrambled round, constantly ascending almost perpendicularly, and in no small risk of accident in the deep crevices stuffed with loose snow among the sharp angles of the rocks—which were chiefly of a compact dark green slate. E.'s dress, too, caught continually on the blocks, which were often so poised that they capsized with a slight weight, rolling down on us; and we made but slow progress.

We had hardly looked round as we ascended, our attention being fully taken up with what we had to do; but when at length we stood on the narrow rugged summit, the scene that burst upon us was magnificent beyond all power of description. The immensity and sublimity of it was inexpressibly solemn: none of us spoke for some moments, and then only in suppressed tones, as if words were vain and utterly inadequate. At a distance of not more than eight to twelve leagues from our central position the glittering wall of icy peaks, the entire range of the Pennine Alps, from Mont Blanc to Monte Rosa, extended in a continuous panorama, some sixty or seventy miles in length—the snowy crest tinged with a faint golden blush, the effect of distance and the glowing sunshine. Not a ridge intervened to interrupt the glorious prospect, but the points of Mont Emilius. The cloudless æther was intensely blue, making one's eyes swim to look up into it, and Glarey declared that such a day he had very rarely known on these mountains.

Among all the grand Alpine scenes it had been our fortune to enjoy, we had never beheld anything at all to compare with that from this point. We were on a grand outwork of the Graian chain, which on either side and behind us presented an overwhelming succession of mountains and glacier fields.



PIC DE LA GRIVOLA—VAL DE COSNE.

To the east it was limited by the scenes of our late adventures, the Fenêtre de Cogne, Mont Arietta, the vast glaciers of Cogne, and the Grand Paradis, up to the glen we had just traversed. To the south were the Tête Noire and the snowy mass of the Rossa; and then, with an irregular ridge intervening, the highest inaccessible and wondrous peak of the Corne de Cogne, or Pic de la Grivola, which had so often engrossed our admiration, from the Cramont to the Col de Combetta. Singularly beautiful as its wonderful outline had appeared at a distance, it was even far more extraordinary in close proximity. Towards the north its sharply-defined slope cut the sky in a straight line, deeply and smoothly coated with snow, apparently far too steep for human foot to scale; while to the south it presented a bare rugged face, the protruding edges of upreared strata. I know no other peak that can be compared with it for the combination of grandeur and unique form.

From the edge of our craggy ridge we looked deep down on the west side on to the enormous glacier of Monnaie, between us and the Grivola, admirably seen in all its transitions from the névé downwards. Under the Grivola and Rossa it was perfectly smooth and exquisitely white, the increasing waves of distortion soon becoming deeply intersected by crevasses of a glorious blue; stretching away into one wild sea of icebergs and sharp aiguilles, apparently 50 to 100 feet high; and shooting its dark moraines at last, over the dirt-stained ice, into the valley at a vast depth, some miles below. Though we were at such a height above it, the narrow giddy edge where we stood, so perpendicularly overhung the glacier, that we were able to heave down the largest blocks we could lift; and it was grand to see them strike in their descent against a jutting crag, send a cloud of splinters flying, and then, leaping on to the glacier, bound over it in wide jumps to the middle, where they were swallowed up in an awful crevasse.

Turning once more to the Pennine range, the exquisite pale

rosy-gold tint of the icy crest was the more remarkable, after the eyes had been fixed some time on the cold white north side of the Graian Alps, and their enormously vast glaciers and snow-fields. Nothing can give the faintest idea of the majestic grandeur with which peak after peak upreared itself, as seen from such an altitude. One after another we recognised old friends, though their more familiar aspects were often changed from the novelty of our position with regard to them. The "Monarch of Mountains" and his attendant Aiguilles flanked it on the left, followed by the singular Dent du Géant, and the beautiful pyramids of the Grande and Petite Jorasse, the Aiguille Verte, and the Aiguilles Droites above the glacier of Triolet. Below them the mountains of the Col Ferret and the Great St. Bernard were seen in their duly diminished proportion. Behind these stretched a distant range, part of the Swiss Alps, perhaps the Dent du Midi; but the outline which I took at the time has a gap here for want of space, which I dared not afterwards fill up from memory. The next Pennine snow-peak was Mont Velan, the nearest to us in the whole chain, but far inferior in grandeur to the noble mass of Mont Combin further to the east, and nearly due north of our position. This mountain has recently been ascended; but the group of which it consists has not yet been investigated with the care that its interest deserves. The true north from us was about the Col de Chermontane and Mont Gelé; but from some cause, possibly magnetic disturbance or defective laying down of points, the maps and the compass disagreed.

A long line of snowy summits, the sources of our old acquaintance the great glacier of Chermontane, extended above the valley of Bionn from Mont Gelé, including Mont Ottema, the Pointe du Glacier, and others, as yet undescribed and imperfectly known. Next were the famed Dent des Bouquetins, Mont Collon, the Dent Blanche, and the Dent d'Erin, springing from among some of the wildest glaciers in

the chain; succeeded by a brilliant array of icy spires—the snowy Château des Dames showing the termination of the Val Biona. But, above all others, the gigantic obelisk of Mont Cervin was by far the grandest and most remarkable object, in its solitary isolation and marvellous proportions. While we looked at it, it seemed actually to rise as its real magnitude became more appreciable. Such a view of this wondrous peak would of itself have repaid the toil of the ascent. The twin points of the Mischabel and Alphabel flanked it, and then the well-known Breithorn; and, last of all, the Lyskam and the "Queen of the Alps" herself. The peaks of Mont Emilius, just in front of us, intercepted a small portion of this part of the panorama; but we could distinguish easily the Vincent Pyramide, Signal Kuppe, Zumstein Spitze, and part of the Höchste Spitze. Mont Emilius, stated by Carrel to be 3593 mètres or 11,785 feet in height, was a fine object in itself. Glarey, who called it the Pointe de Vallaise, said he had been on its summit with the Sardinian Ordnance surveyors, but added that they had taken good care not to mount the Grivola.

Between us and the Pennine Alps lay the deep Val d'Aosta—its bottom hidden from sight—with its tributary valleys and the lower mountain-ridges dividing them, on which we surveyed various familiar points, too numerous to mention. The Becca de Nona lay far beneath us, an inferior point of the group of Mont Emilius, though it appears much the loftiest from Aosta. From it M. Carrel took his excellent panorama, which I had with me. The appended notes will be found very useful by the general traveller in the Italian valleys. Those who have not the opportunity or inclination to mount the Grivola may, with far less fatigue and no risk, obtain from the Becca de Nona a splendid view of the Pennine chain, though, of course, not nearly so grand, from its much lower elevation, nor is there the amazing view, which

our station afforded us, of the wonderful glaciers of the Graian Alps and the last inaccessible cone of the Grivola.

Finding a convenient little vault, down among the blocks, I set the apparatus to boil water, while I sketched and E. rested, quietly enjoying the stupendous scene, the well-earned reward of her perseverance. I had so much difficulty in getting the water heated that my observations were of no value, the highest temperature attained being 83° Cent., ext. temp. 11°. Delapierre, in the mean time, had gone, at my request, to investigate what appeared to be a much better, though somewhat circuitous, route for the descent, passing under the Tête Noire over some beds of snow. As the way lay among a labyrinth of rocks, he was to make a pile of little stones, on projecting points, wherever he could find an easier path for E.; yet short as the distance seemed, it took him a good half-hour to accomplish this. He returned with the intelligence that it appeared much more practicable than our route on ascending. Glarey said it was not safe to cross the snow-beds, and urged other objections, but I had already ceased to attend to him, and left him to smoke his pipe and examine his rifle in lazy apathy. An hour and a half was all that we dared afford to spend on the summit, and it sped with such rapidity in sketching and other occupations that I had barely time to swallow a mouthful of bread and a little wine before we prepared to descend. I should much have liked to have advanced along the ridge up to the shattered peaks which projected over the Val de Cogne, but it would have been a long, tedious, and difficult scramble, and was out of the question. The vast continuous pile of blocks of every size, which composes even the very summit from end to end, is singularly wild, and gave one a fearful idea of the tremendous convulsion that must have broken up the solid rock, and left the fragments piled in such savage fashion on so narrow a crest.

A last lingering gaze on that indelibly-impressed scene, with the conviction that in all human probability we should never behold it again, and we turned to commence the descent—a much more difficult task, as all mountaineers know, than the ascent. Glarey wished us to take down by the precipice; but, leaving him to his own devices—with instructions to pick up the wraps, provisions, and mule, and join us at the châlets—we took our own route, following the direction Delapierre had marked out with the stones, leading over the rough "clappey" to the descent which I had noted with my telescope from below. Glarey shook his head, but we had all felt during the day that his evident intention had been to take us, in chasseur fashion, up and down the most difficult places possible, by which he could save a yard, and, as Delapierre said, utterly regardless of "Madame." The first bed of snow was steep, but, with a few niches made with our ice-poles, it was safely crossed by all, and the second in the same manner. I believe, from what Glarey said, they were of far larger extent that year than he had known them for long.

Here we were suddenly excited on coming on the fresh tracks of a bouquetin, which had evidently passed but a very short time before, and, probably disturbed by hearing us on the summit, had taken its way to the Tête Noire. We waited in vain, hoping to see one of these noble animals bound from some hidden nook, but at length returned to our work. The descent was now rapid, and required caution on the steep sliding mass of rubbish and movable rocks, down which we plunged with several narrow escapes from broken shins, or worse. Delapierre and myself taking rival routes—in which, to our amusement, one or the other was alternately discomfited and got into difficulties among the wild chaos—we reached the bottom and trod once more the brown scanty pasture. The rest of the way to the châlets, though it was interrupted by a few difficulties, was quickly accomplished,

and we reached them in an hour and a half from the summit, congratulating ourselves on having taken the comparatively easy route I had chosen, against the advice of Glarey.

That worthy was nowhere to be seen, and the telescope failed to discover him on the heights above us, though poor Mora was distinguishable, looking very forlorn. He had certainly to descend by the formidable "clappey," but this was not much for a chasseur. E. imagined he might have gone after a bouquetin, which Delapierre too thought possible; while I suggested that he might have met with an "accident" to one of the two bottles left in the cache. We were very hungry, not having yet dined, and our patience began to be sorely tried, when at last he appeared, leading Mora, and, as soon as he got down to us, the first glance showed that I had rightly anticipated his misfortune. His countenance and gait were utterly changed; he was no longer the surefooted chasseur, and his visage was ruefully vacant, as if some catastrophe had occurred. The saddle was only half-girthed, the wraps and other matters in dire confusion, and it was evident he had something calamitous to communicate. He produced Delapierre's bottle of rum, empty all but a glass or two, and with considerable difficulty explained that it had been abstracted by two shepherds, and after great exertion discovered by him minus the cork. He shortly added that there were four shepherds, when Delapierre began to joke him on the improbability of one even having been found in such a place. This he resented fiercely; but when I remarked it was a great pity, as it was such good rum, he unwittingly replied, amid our loud laughter, that it was "most excellent; he had never tasted better." We then satisfied our hunger, and, packing all compactly on Mora, left the curé's brother to stagger after us as we led the way down to Cogne, quizzing him unmercifully whenever we came to a halt, which he took very sulkily. Calling in to see the woman who had sympathized so deeply with E. in

the morning to assure her of her safety, we again entered the beautiful pine and larch forest. A shorter and steeper path led us rapidly down through it, and three hours from the highest châlets brought us to the valley, reaching Cogne at 8 P.M.

The Abbé Cavagnet, who had taken so much interest in our expedition, was waiting to receive us; but, delighted as he was to hear of our success, both he and the curé, who soon arrived, were at first somewhat incredulous, until assured by Glarey, that E. had achieved the ascent. They had all evidently anticipated that she would give up the attempt after trying the "clappey," and leave me to finish the remainder with Glarey. The lower room of the little inn was filled with curious inquirers, anxious to hear from our guides their accounts of the results of the day's adventure. Glarey was glorious, and the noise and discussion great. A little room above, neat and clean, we were glad to have to ourselves; the people were attentive, and we got decent plain food, though no meat was to be had, as usual. In fact, it was but rarely we got it in any of these Vals; but though often for days, or even a week together, without tasting animal food, we never felt worse for the want of it.

I had inquired of Glarey if he could procure me specimens of the bouquetins' horns, male and female. His best pairs, he said, were concealed up in the mountains, but he would do what he could. Late at night he came in with a bag, and amongst a quantity of chamois' horns, from which I selected several unusually large sets, he produced a fine pair which had been found with the skeleton of a buck bouquetin that spring among the remains of an avalanche. They were somewhat blanched, which a little oil would soon restore, and I secured them after some bargaining, which was not facilitated by his "misfortune" on the mountains, followed evidently by a similar mishap since. Baron Peccoz subsequently presented me with a pair of those of the "chèvre de bou-

quetin," or female, and also of a young male; making, with the skin purchased at Courmayeur, a very complete collection, considering the rarity of the animal. The great difficulty was to get them carried though Piedmont, and especially on the mule. Heavy fines and imprisonment being the penalty for killing or aiding in killing them, or even having any part of them in one's possession, we had many amusing adventures afterwards in securing our spoils from mischance, bulky as they were. It would have been difficult to have persuaded the authorities that they had been found in an avalanche, or given by a friend of the King's; and though I had not much fear for any consequences to myself, yet we might not improbably have had them seized. With a little contrivance, however, the curve of the large pair fitted admirably under the belly of the mule, where E.'s holland riding-skirt concealed them, and the others were more easily stowed away.

It would be gratifying to the naturalist could the laws for their protection be much more strictly enforced. The ibex is becoming rarer every year, and though it once was distributed all over the mountains of Switzerland, the Tyrol, Savoy, and Piedmont, it has been extinct in the two former for very long. Occasionally the live animal has been taken and kept in confinement, but it is very rarely to be seen except preserved in museums, as at Berne and Zurich, where —in the former especially—are some fine stuffed specimens. There are two in the British Museum, one of which was presented by Messrs. Murray and Brockedon, who brought it from Ponte in the Val d'Orca, on the south side of the Cogne range.

Blasius, in his recent excellent work,* has minutely and accurately described the character of the bouquetin or steinbock, *Capra ibex;* and also those of the other varieties or

* Naturgeschichte der Saugethiere, von J. H. Blasius, Brunswick, 1857, p. 475, &c.

species—whichever they may be considered—allied to it. Tschudi also has given a somewhat full history of its haunts and habits, and the substance of their remarks may not be out of place or uninteresting here. The latter writer asserts that it was formerly indigenous to all the higher mountains of Germany and the Ural, as well as the Alps, but without giving any proof, and it seems very doubtful if such were the case. The last ibex remaining in the canton Glarus was shot in 1550 on the Glärnisch Alps, and its horns are still preserved in the Council House at Glarus. In the Grisons it was once frequent, and live specimens were very often sent from thence to Inspruck. In the mountains of the Engadine, Chiavenna, and Bregaglia, where they were formerly abundant, they had so diminished in 1612 that the chase was forbidden under a penalty of fifty crowns. In the middle of the last century one was shot by a Judge Steiger, while crossing the St. Gothard. In the Tyrol, the Archbishops of Salzburg specially preserved them with great care, but ineffectually, and they have been long extinct. Blasius saw the horns of one at Zell, killed in the Zillergrund in the previous century.

The Dent des Bouquetins in the Pennine chain takes its name from them, but they are no longer found there. Tschudi says, indeed, that twenty years ago the last ibex was shot on the adjoining Aiguilles Rouges, and that the bodies of seven were discovered in an avalanche near Arolla: but the hunters of Zermatt and the well-known curé of Saas, M. Imseng, deny it. I made many inquiries myself in various quarters from persons well qualified to give an opinion, and they knew of no occurrence of the bouquetin in any of the districts of Monte Rosa, within their own memories. In the Val Tournanche they ridiculed the idea. In the Val de Lys, no one in the Alps is more likely to have known or heard of its appearance there than the prince of chasseurs, Baron Peccoz. But both by himself and the Albesinis, the Nimrods of the Val Macugnaga, I was most positively

assured they had never heard of it anywhere near Monte Rosa.

Their haunts are now entirely confined to the Graian chain, the lofty snow and glacier ranges of the Vals Cogne, Savaranche, Grisanche, and perhaps Tignes, between Piedmont and Savoy, while the Pic de la Grivola may be called their head-quarters; and from this region all the specimens obtained during the present century have been brought. From its stately appearance and noble horns, its rarity, and the prohibition of its chace, it is no wonder that the bouquetin is regarded with such enthusiastic admiration and eager envy by the Piedmontese chasseurs, who will brave every danger and difficulty to indulge their passion. In 1821 Zumstein most laudably interfered for its preservation, and by his representations to the Government it has since then been protected as above stated, but even these restrictions are not sufficient. It is no easy matter to detect a chasseur in these wild ranges, and I had information of several pairs of fine horns, which were only waiting a favourable opportunity to be brought down from their hiding-places in the snow-region.

A better idea of this beautiful animal than mere description can give, will be formed from the woodcut, for which I am indebted to the skilful pencil of Mr. Wolf:—"the Landseer of wild animals," as he was called by the late Lord Ellesmere—and who has had the opportunity of studying the bouquetin alive at Branenburg, in Bavaria—where a pair of them are kept by an Italian nobleman.

The noble horns, which are its most characteristic feature, are in a full-grown buck at least two feet long, and often much more, and of a deep dark olive, inclining to black in some individuals. They are gracefully falcated or curved back, and each year's growth is marked by a stout protuberant knotty ring, with often a lesser intermediate one between each, more or less distinct. In the pair I possess, which are

THE BOUQUETIN OR STEINBOCK

two feet long, there are eight of these yearly rings; but in others I have seen, as the magnificent specimens in Baron Peccoz's collection, they were much more numerous, reaching to twelve and eighteen, and the horns themselves three feet long. Their thickness at the base is proportionate, and the weight is something enormous for an animal of such size to carry. The muscular development of the head and neck of the buck is accordingly extremely powerful, and, as will be seen, gives them a much more rounded and full appearance than the common goat, of which it has been sometimes supposed to be the parent stock. The ears are short and placed far back; and, like the chamois, they have no lachrymal gland. The whole frame is, indeed, most muscular, and much larger as well as more powerful than the chamois. Its legs are stouter and thicker, and the hard hoofs spreading. The strength of their sinews is such, that Tschudi says they will scale a rock ten or fifteen feet high, and almost perpendicular, in three steps, and can stand firmly on the top of a gate. A young tame ibex has been seen to jump clean over a man's head without taking a run.

The female is very easily distinguished by the smallness of her horns. Those of an old one given to me by Baron Peccoz, though with fourteen distinct rings, are only seven inches in length.

They generally go in small herds, pairing in January; and, later on, the old bucks separate and live in solitary stateliness on the highest peaks. The young one is born in June, and a few days after its birth it is almost impossible to take it alive, such is its agility. The ibex has been found to produce a fruitful hybrid with the common goat, and a numerous progeny of these has been reared at Branenburg.

The colour of the young animal is much lighter than that of the adult. The skin of the one I obtained at Courmayeur is of a greyish brown, approaching very nearly to mouse colour, and lighter underneath. When full grown they are

of a deeper brown, and the legs and other markings still darker. Mr. Wolf describes the colour of their newly-attained summer coat as very brilliant, showing in the male a characteristic light red colour on his hind quarters and behind the elbow, in both which places it is joined by almost black markings on the under side; and the black and white of the legs and belly are very striking. The winter coat is very much longer and coarser. Though often so represented, they have no proper beard, only a tuft of long stiff hair which grows under the chin; but in its shaggy winter coat, as represented in the illustration, it is much longer and denser, disappearing again in the summer. The tail is always erect, dark above and white underneath.

Blasius, who doubts their specific distinctness, distinguishes the allied varieties of the genus Capra into, first, the *Pyrenaica*, found in the Pyrenees, and identical with the *C. hispanica* of the Sierra Nevada. The horns differ from those of the ibex in the form of their rings and other minor points, beside which they are peculiarly curved, or cochleated ("*schraubenförmig*"), with the points inward, so as to present a lyre shape. Beside the *Pyrenaica*, the other European species is the *Capra Beden*, found in Crete and some of the islands of the Archipelago, as also on Mont Olympus, in Syria, and Nubia. The horns are very strongly curved, and it has a dense beard. Living as it does in these hot climates, and in the wild desert, one can hardly suppose it to be the same species as the bouquetin of the snow regions of the Alps. Of the horns of the *C. Caucasica*, he gives a drawing from a buck obtained in the winter of 1841 in the Caucasus; but entirely different from those named the *Caucasica* in the British Museum, which are much more elegant, the rings beautifully notched with a peculiar twist—the tips very much curved back, but not lyre-shaped, as in Blasius' figure, which is more like a ram's horn in comparison. The *Capra Sibirica* is most like the ibex, but the horns are much more curved.

The marvellous accounts of the old writers respecting the ibex are, of course, numerous. As an instance, Gesner gravely relates that, when an old one finds it must die, it climbs to the highest mountain peaks, hangs on to a rock with its horns, twists itself round and round upon them until they are worn off, when it falls down and expires. Their blood has long been in high repute as an extraordinary cure for all diseases, acting as a talisman, and the chasseurs formerly used to obtain enormous sums for it.

In the summer they frequent the summits of the loftiest peaks, descending at night to feed on the fresh Alpine pastures. In the winter the inhospitable snow drives them down to the forests, where they browse on the pine tops and the long dense lichens, which hang pendent from them in exhaustless quantity.

We were not fortunate enough to taste its flesh, but were repeatedly assured by Baron Peccoz, Glarey, and others, that it is most delicate and "gamey," far superior to that of chamois, and a fine buck will weigh upwards of 2 cwt.

Long may the Grivola and the mountains of Cogne afford a safe sanctuary to this the most striking and interesting, as it is one of the rarest animals of Europe!

CHAPTER XV.

VAL DE COGNE — VAL D'AOSTA — VAL CHALLANT — VAL DE LYS.

Start with the Professor — Iron-mines — Descent of Val Cogne — Inscriptions — Medicinal uses of ferns — Hermit of Fenis — Roman aqueduct, Pont d'Ael — View into Val d'Aosta — Aimaville — Fare at cabaret — Giant's grave — Bridge of St. Marcel — Copper-mines and "Fontaine Bleue" — Chambave wine — Leone d'Oro, Châtillon — Verres — Difficulty with Carabiniers — Entrance of Val Challant — Hemp and materials of dress — Fair of Challant — Brusone — Col de Ransola — Return to Gressoney — Last evenings with friends.

THE day following our ascent of the Grivola, we had intended crossing over the mountains north of Cogne, by Arpisson, and climbing the Becca de Nona, dropping down again into the Val d'Aosta by St. Marcel; but the grand view, which we had seen under circumstances of such unusual splendour, from the much loftier position of the Grivola, had, we felt, spoiled us for that from the Becca. My foot, which had been crushed by the fall of a block of stone on the Lys Glacier, had been so painful on the Grivola, that I walked with difficulty; added to which my boots were completely done up with the "clappey," and would scarcely have held together for such another hard day's work. The idea therefore was abandoned; and as the Professor was returning down the Val de Cogne to Aosta next morning, we agreed to go together.

Heavy mist turning to a slight drizzle as we started, made us congratulate ourselves the more on our good fortune the day before. It indeed prevented us going to the "filons" or iron-mines, but we had had a good survey of them through the telescope, and the more so as they are worked above ground. The summit of the mountain is in fact almost

entirely of iron ore, a vein of which continues down to Ivrea. The specimens brought to me were very rich and heavy. It has hitherto been worked only in the most clumsy and unscientific manner, with the rudest machinery, and no tramroads, the ore being chiefly carried from the mines to Aimaville or Villeneuve on the backs of women. Under such circumstances, it is hardly to be wondered at, that, as the local supply of wood for fuel began to fail, the rich profit the mines at one time used to yield gradually diminished; until, for some years past, they have hardly been worked at all, and the "Societé des Mines de Fer" has become bankrupt. This failure has produced most calamitous results to the inhabitants of the Val Cogne, extending to the Val d'Aosta, which, especially the upper part, was greatly dependent on them. I am informed that their produce was at one time valued at 60,000 francs, and the total loss to the valley on the mines and furnaces is now at least 1,000,000 francs per annum. Cogne, once one of the richest communes in the Sardinian states, is at present one of the poorest.

I was assured that if taken up by English capitalists—whom they seemed very anxious should buy and work them—the mines would be found highly remunerative. As far as I can judge from report, this is not improbable. But though they are no doubt extremely rich, there are two serious difficulties in the way; one, the great scarcity of wood, which has been recklessly cleared away for the requirement of the moment, and nothing left to replace it. The other is, the innumerable obstacles to be surmounted, in making any change in the existing state of things. I have seen instances of it which have astonished me. To erect a mill, to turn or dam a torrent, make a bridge, or any necessary improvement, involves an amount of official correspondence and trouble hardly credible, and a loss of months and often years of time. There is no lack of disposition on the part of Government to facilitate such works, but the complicated usages with

regard to property require thorough reform before enterprise can meet with any encouragement; and even here, in the remotest mountains of Piedmont, red-tapism is dominant. Lately a project has been seriously talked of, especially in the Val d'Aosta, of continuing the line of railroad, now in progress from Turin to Ivrea, up to Aosta; and from thence to tunnel through the Alps under the Col de Menou:—a short but little-used route, parallel to the Great St. Bernard; leading from Etroubles by the Val de Menou, and over the flank of Mont Velan and the Glacier of Menou, down into the Val d'Entremont. Should this scheme ever be carried out, it is evident that it will afford immense facilities for developing the vast mineral wealth of Cogne, and the other branches of the Val d'Aosta.

The wild and savage scenery, the many objects of botanical and geological interest, with the conversation of our accomplished companion, all contributed to the enjoyment of the morning's walk. Below Crétaz and Epinel the valley contracted and the gorge became wilder. At first the road was good, and this, and numerous other public works of the greatest utility to Cogne, are chiefly owing to the liberal and enlightened exertions of a Dr. Grappin, who had devoted himself to benefiting his native valley. He had died a short time previously, but his name will long live in the remembrance of those for whose welfare he laboured so earnestly. On a high face of rock, which had been cut away in improving the road, were a number of his inscriptions painted in large white letters, quotations from various authors; and doubtful as the good taste of this decoration may be, yet such as the following are an index to the views and motives which influenced him, and have no doubt read a good moral to many a passer by:—"Quand le songe de la vie sera terminé, à quoi auront servi nos actions, si elles ne laissent la trace de l'utilité." —Sady. "La mémoire des actions utiles au public est la seule qui résistera aux atteintes du temps. La véritable

honneur est d'être utile aux hommes."—Thomas: with others of similar import from Cicero, Ovid, Condillac, &c.

Lycopodium helveticum was abundant by the wayside, and the Professor informed us it was much esteemed for its medicinal qualities, an infusion of its fronds being taken for coughs; another species, the stag's-head club moss, *L. clavatum*, is collected, dried, and used by the peasantry in winter colds and influenza. The beautiful little fern *Botrychium lunaria-minor*, abundant on all these mountains in July and August, is also in great repute as an embrocation; highly extolled in all cases of external inflammation and similar affections. The fronds are merely infused in olive oil, which is drawn off, and is then fit for use. Among many rare plants found about Cogne is the *Linnæa borealis;* so interesting, in addition to its own elegant and singular habit, from its having been discovered by Linnæus himself in his Lapland tour, and chosen by him to commemorate his own name. The dense clouds all day concealed all but the immediately prominent geological features. At Vieges my attention was drawn to numerous large blocks of a beautifully fine grey granite riven from the impending heights, which are a part of the Grivola range. In this commune are the châlets of Nomenon, which have sometimes given the name of Pic de Nomenon to the Grivola; but as to the nomenclature of this and the neighbouring mountains, there is much obscurity which I was unable to clear up.

The torrent pours rapidly down the deepening ravine, until at last it is lost to sight in the profound chasm, above which the track runs, with precarious protection from the gulf below. In the midst of this wild scenery we suddenly met with a singular figure, dressed in black cassock and greenish scapular, with sandalled feet, bare head, and a long black beard. The Professor recognised him as the hermit of Fenis, where he inhabits a little hut built on the rock; and most hermit-like he looked, more accordant with one's romance

suggested ideas of the venerable anchorite of the olden time, than the dirty lazy impostors of modern Italy. Half an hour before reaching the mouth of the valley we came to the Pont d'Ael, where, a short distance below the path, the ravine is crossed by an old Roman aqueduct. Built by Caius Aimus of Padua and his son—as recorded by the inscription on it, and of whom mention has already been made as possessors of Aimaville in the time of Augustus—it is still perfect, and singularly interesting. The massive Roman masonry, the bold span with which the single arch crosses the chasm, and the profound depth of some four hundred feet below it, are wonderfully impressive.

When the Val d'Aosta came in view, clear from the mist behind us, and glittering in the morning sun, we thought that from no other point had its charming features presented so matchless a scene. Castles, villas, clustered hamlets among rich wood and sunny vineyards, the flashing river and the green meadows, were backed up by the long range of purple mountains, relieved by the frosted heads of the great Combin and other of the Pennine snow Alps. Turning to the right from the main road, we descended on Aimaville, passing the "rococo" château, and reached the village. All of us were by this time very hungry, and, following the Professor, we entered a humble cabaret, down a bye lane. "Pain dur" and cheese were all they had to offer; but, led by curiosity to examine a copper in the kitchen containing what seemed to be black soup, but proved to be wood-ashes and egg-shells for washing, I caught sight of a large pot full of splendid potatoes boiled to perfection. The sight was irresistible, and, carrying off a bowlful, we all feasted on them with such relish and appetites as, even at this distance of time, invest their memory with an excellence never found in any potato before or since.

When we again continued the journey, the pleasant lanes lay through the characteristically rich scenery of the Val;

winding along at the foot of the mountain, with lovely views under the shadowing trees, of the valley, the picturesque towers and buildings of Aosta, and our former route up the Val Pellina. Passing close to an enormous bare mound of earth and rubbish—which we had before noticed from Aosta, thrusting itself from the mountain side, like a vast unfinished railway embankment—I inquired of the Professor if there were any explanation of its singular form and position; but he knew none, except the popular tradition that it was the burial-place of a giant of ancient days, who used the mountain tops as stepping-stones. It appears like an *éboulement* from the mountain above, as neither torrent nor glacier could have produced it.

Passing through the hamlets of Jovençan and Gressan, we arrived at the bridge which crosses the Doire to Aosta; and where on our last visit we had witnessed the glorious sunset and the descent of the procession from the hermitage of St. Grat. Here we halted, the Professor parting company with us to cross the river to Aosta, and we bade him farewell with many mutual hopes of meeting again. His views were liberal and unprejudiced; and a discourse pronounced before the "Société Académique" of Aosta, of which he was good enough to send me a copy, showed, like his conversation, an extensive and enlightened acquaintance with history, and the various branches of science, which made one hopeful for the students under his care. We heard that he commanded the love and respect of all ages in the college at Aosta. To a correspondence with him, continued since then, I am indebted for much valuable information, which I am glad to acknowledge here.

As we had nothing to do in Aosta, and wished to change our route as far as possible, we contined along the right bank of the Doire, by the villages of Pollein and Brissogne; over a tract devastated by floods, succeeded by very rich meadows and orchards, where they were busy gathering walnuts and

fruit. A group of bonnie-looking girls, garlanded with clematis, left their play and followed us for some distance to stare at the strange travellers. The turrets of the grand old castle of Quart and its little village stood finely placed above a deep gorge on the opposite side. Scrambling over fences and enclosures where there was no track, we made for a fine bridge over the Doire near St. Marcel, and crossing the river gained the main road. We had hardly gone many hundred yards, Delapierre and I a little in advance of E., when we heard her suddenly call, and, turning round, saw Mora again in the act of rolling over. Luckily she went down on the off side, and E. was just in time to save herself by springing off the saddle, while Mora rolled and plunged furiously on the dusty road. With difficulty we got her up, though, for a wonder, but little injury was done to the baggage, and we all walked down to Nus.

Above St. Marcel are mines of copper and manganese; and also the singular "Fontaine bleue" described by De Saussure. We had no time to go there, as it and the mines are three or four hours' walk from the hamlet. He describes it as a stream falling down over the rock in the form of a cascade, presenting the most pleasing and extraordinary appearance. The entire bottom of the stream, rocks, stones, wood, and soil, is covered with a substance of every shade between blue and green; that entirely under water of a beautiful sky blue; that only partially moistened, green; and the dry part of a pale blue. The stream itself, which is perfectly transparent, runs over this coloured bed, dashing into foam; and presents in its refractions the most singular effect, resembling the coloured flames produced by throwing verdigris on burning wood. The stream springs from the earth, at the foot of the mountain containing the copper mines of St. Marcel, and this remarkable appearance arises from the impregnation of the water with the copper.*

* De Saussure, Voyages, § 2295.

In making some inquiries at Nus, we had again occasion to remark, what had often struck us in other parts of the Val d'Aosta, that the peasants do not call the months by their own names, but by the saints whose festivals occur in them, as St. Jean, St. Barthélemy, St. Michel, Toussaint, &c. The castle of Fenis on the opposite side is a fine massive structure, one of the most imposing in the Val d'Aosta. Further down, and half way to Châtillon, are the vineyards of Chambave, famed for the excellent Muscat wine they produce; but which we found too rich and full bodied, and much preferred many other vintages, such as the dry Carême or the fragrant Torette.

It was beginning to rain when we reached Châtillon, and we were glad to get to our old quarters at the Leone d'Oro, dirty as they were. Delapierre was professionally disgusted with the neglect and utter want of cleanliness and comfort; and gave the padrone some very good advice. He was, we found, only a tenant, and his time had nearly expired; and it may be taken as a general rule in this country at least, that only the proprietor himself makes a good host and a comfortable inn. A supply of Turin and Aostan papers furnished us with occupation for the evening, not having heard for some time how the world was getting on without us.

On the morning of the 19th September we started for Verres, passing St. Vincent, Mont Jovet, and other more prominent points in the romantic Val d'Aosta, the charm of which was enhanced by the knowledge that it was our last day's enjoyment of it; our future route taking us daily further away. Delapierre had gone on with Mora to get her worn-out shoes replaced at Verres, and when we rejoined him we found ourselves in an unexpected dilemma. Two blustering Carabiniers, the "gendarmes" of Piedmont, were hanging about and watching his proceedings, and when we came up their vigilance was redoubled. We had nothing to fear for but the bouquetin's horns, and these, Delapierre told me

aside, were safe; but when Mora was shod, and all was ready, the difficulty was, how to get them unobserved on to the mule. Every manœuvre was unsuccessful in diverting the vigilance of the Carabiniers, and, after adjusting and re-adjusting every conceivable part of our baggage, we were obliged to start, leaving them concealed at the blacksmith's. When we set off, the Carabiniers, with their clanking swords and cocked hats, strolled back up the street of Verres; and at a judicious interval Delapierre ran back to the smithy, secured the horns in a plaid, and they were soon safely replaced under Mora.

Turning back again, and passing through the town, we took to the right, and began the ascent of the Val Challant by zigzag staircases. The road had until recently been notoriously rough and perilous, but the improved track was bad enough for Mora after her late exertions. Near Challant St. Victoire I heard of a lake to the left, at an hour's distance among the mountains, in which there were quantities of a small and peculiar fish; my curiosity was excited, and Delapierre made every exertion to induce some one to go and procure specimens, with the offer of a liberal reward on bringing them to Gressoney, but without success. The mountains on either side the valley were entirely of serpentine, and the scenery most romantic. Floods of sunshine poured through the foliage, lighting up the many-coloured rocks, and irradiating the silvery torrents which dashed down the mountain sides, and murmured through the meadows. But exquisitely lovely as was the natural scenery of the Val, the one blot marred the whole. Hardly a person whom we met was exempt from the curse of crétinism in its worst form, and goître was universal. In no part of the Val d'Aosta had we observed it more prevalent, though, strange to say, amongst the cleanly, thrifty inhabitants of the upper part of the same Val, the Val d'Ayas, it is hardly known; a sufficient proof that snow or ice-water has nothing to do with its origin.

The wretchedly imbecile creatures could not give even Delapierre an intelligible answer to a single question in their own patois. A few less helpless than the rest were getting in the fine crops of potatoes, or gathering the ripe fruit which loaded the trees.

Much hemp was grown, and in fact, wherever it can be cultivated, it is one of the staple and universal products of all the valleys. It is in very much greater esteem than cotton; and, as an instance, we were told that, while a pair of cotton sheets might be had for 2¼ francs, a pair of hemp cost 10 francs. The beautifully snow-white shirts with wide sleeves worn by the women, are all of this material, homespun and made. They also spin and weave their own woollen dresses. The scarlet cloth which distinguishes the Gressoneyer women was, I found, dyed in the same way as the "habit rouge" described at Courmayeur. A large and important fair used to be held at Challant St Anselm, and lasted three or four days. It attracted people from Turin, Switzerland, and even the Tyrol; the Tyrolese carrying on a great trade in bells for cows, a very important article in the mountain pastures, where every cow is thus musically decorated. The bells are large, and generally of a square flattened shape, made of a remarkably sonorous mixture of bronze, and I have heard them at more than a mile's distance. The natives of these valleys now make their own; and the great fair of Challant has dwindled to a very small gathering which only lasts one day.

A ruin of another castle of the ubiquitous Challant family, here at home in their own Val, *par excellence*, stands in an open and romantic reach, where a torrent from Mont Nery joins the Evanson. We were approaching Brussone when our further progress for the day was nearly put a stop to; Mora trod among the coils of an asp basking in the path, which was just drawing itself back in the act of striking at her leg, when I stunned it with my alpenstock. Accidents

from their bite are not unfrequent, more especially among cows and sheep, and the consequences are often serious, though I never actually heard of their being fatal: considerable swelling and inflammation are the ordinary symptoms.

When we entered the little innyard at Brussone all the culinary articles in the establishment seemed undergoing a thorough cleaning and polishing in the open air—judging from experience, probably an annual one; and the rows of shining pans, moulds, and copper vessels, in every direction were quite refulgent. The rooms, on an upper balcony of the house, which was of German construction, were cleaner than we had been led to expect; and we felt we could have made ourselves very comfortable had we found it necessary to stay. We had, however, ample time to cross by the Col de Ranzola to Gressoney; and having already explored the upper part of the Val Challant—the Val d'Ayas—after an hour's rest for man and beast, commenced the steep ascent of the Ranzola immediately behind the inn. We looked backwards from time to time on the course of our former journey from Châtillon, passing over the Col de Jon, and through the dark pine forest under Mont Zerbion. Half way up was a beautiful sunny view down into the Val Challant, with its castle and the grand gloomy mass of Mont Nery above it.

The upper part of the ascent, above St. Grat, is a bare, wild, and desolate scene, but easy walking, and I pushed on half an hour ahead to gain time to enjoy once more the splendid view of Monte Rosa. Unfortunately before reaching the summit a sudden current of cold air enveloped me in thick mist, and when I stood on the crest there was nothing to be seen but a little ruinous stone hut or oratory, into which I was glad to creep for shelter from the chilly clouds. While waiting there, a very large flock of swallows swept swiftly over the Col in a south-easterly direction, and with a steadiness of purpose that showed they were on their autumn

course from the north towards Africa. On the cold mountain top, with the wind whistling, and the scudding clouds driving past me, I thought of the palm-groves and the tropical scenes to which they were probably winging their way.

E. arrived on the summit in 2¼ hours from Brussone; and, as usual, dismounted for the descent, when the baggage was carefully arranged and tightened. We rejoiced that we had already seen Monte Rosa so splendidly from the Pointe de Combetta, as it was evident there was no chance of the clouds breaking again for the day. Reaching the châlet and rejoining our former track from the Combetta just below, we dropped rapidly down the steep "baissez genoux," mentioned before as so called by the Val Sesian painters. But if excessively steep, it is also a very short cut, and we were at the bottom of it in three quarters of an hour from the Col. Mora followed us; how, to this day, I can hardly imagine, laden as she was; but she scrambled down among the bare pine roots, deep steps, and slippery ledges, Delapierre laughing at her as heartily as we did.

It seemed like returning home as we emerged into the open Val de Lys, and the level meadows brought us once more to the wooden bridge of Gressoney, and Delapierre's cheerful house; where we congratulated each other on finding ourselves safe and sound after our adventures. As soon as Baron Peccoz heard of our return, and the successful issue of the tour he had induced us to take, he hastened to welcome us; and as he had had misgivings in our absence as to whether it would not prove too arduous for E., he was the more delighted at her accomplishment of the ascent of the Grivola: the difficulties of which he well knew from his own experience.

After our return the weather broke for some days, the first sign of which had been the clouds settling on the Col de Ranzola, and several intended expeditions were thus frustrated. Among others, the ascent of the Vincent Pyramide,

and even the Zumstein Spitze itself, had been seriously talked of, Delapierre having been already making efforts to organize a party; but the fresh fall of snow put an end to all idea of it for the season.

It now became necessary to think of, and make arrangements for continuing our tour, and Delapierre was called in to aid in forming our plans. All difficulties at once vanished on his volunteering to accompany us, having, as he said, so thoroughly enjoyed our expedition together to Cogne. We were only too delighted to have his invaluable services, as well as his company. No courier could have been more active or useful in every way, and his constant attentions to E.'s comfort lessened in no small degree the many inconveniences and hardships which a lady roughing it in these Alps must necessarily encounter. His good temper never failed, and his thorough knowledge, like most of the Gressoneyers, of the various patois of the different valleys, beside German, French, and Italian, was only less useful than his skill in cooking, and his experience in the mysteries of charges. For himself, he had often said how to his taste was the independent way in which we travelled, taking everything as it came without grumbling, and enjoying any little difficulties; and the mere fact of his volunteering to leave his newly established *pension* for so long a time, was proof of his sincerity. It was quickly settled that we should start again together for the Val Sesia, as soon as he had made the needful arrangements for the care of the inn in his absence, and the weather should clear up.

Though the rain and clouds prevented any long excursion, we had many rambles about the neighbourhood, sketching, geologizing, and botanizing, sometimes accompanied by Zumstein. Amongst other ferns I found the beautiful little *Woodsia hyperborea* and *Asplenium Germanicum* for the first time. The wet portions of the days were amply occupied in selecting and labelling specimens, drying and arranging

plants and ferns, and getting our now somewhat bulky collections into a portable shape, with many other matters which filled up every spare minute. A day was spent very agreeably in again examining the Baron's collection in detail, when he presented me with the horns of a young bouquetin, and of a female. The thick velvet-like white flower of our favourite everlasting, the *Leontopodium alpinum*,—of which his daughter Palmira gave E. a beautiful bouquet gathered on the Weiss Horn,—was, we learnt, called "Edelweiss" in the native German, a name worthy of the flower.

Our evenings by the blazing wood fire at Delapierre's were generally enlivened by the pleasant company of some of our friends. On one occasion, it having become known that it was my birthday, a little party assembled at a dinner planned and executed by our host in his best style. The Baron went to the mountains for chamois, which, however, he did not meet with; but excellent marmot and ptarmigan well supplied its place. Fresh trout came from the Val Sesia, and Delapierre's chefs-d'œuvre in the way of entrées were followed by a sumptuous dessert of fruit from the Val d'Aosta: while his care had provided the unexpected luxury in the little commune of Gressoney of a bottle of champagne, in which the healths were drunk in the old German fashion. Zumstein was radiant with happiness, having that day received an account from Zermatt certifying that his iron cross on the Zumstein Spitze had, after so many years, been again seen by an English party on the 19th of August, from the Höchste Spitze. Among the many *agrémens* of that evening, not the least gratifying was the cordial feeling evinced in an animated political discussion, with regard to the alliance between Sardinia and England, and the warm hopes expressed that it might long continue. There appeared among all classes in Piedmont, excepting the priests, a strong feeling of sympathy with England, and an evident friendliness which added no little to the pleasure of our intercourse with them.

The rain spoiled the annual fair, where we should otherwise have seen all the people of the Val in their gala costumes, the women wearing their gold and silver head-dresses. As it was, a crowd of bright pink and red umbrellas were the only lively feature on the occasion, and the staple articles of sale were cattle, sheep, and goats. At length the dull weather and mist cleared up, just as Delapierre and ourselves had finished all our preparations, and were ready for the start, which was fixed for the next day. Our kind and hearty friends came in, in the evening, to say good bye, and we felt no small regret at leaving them, and our pleasant quarters in their hospitable valley; now familiar to us as home, and identified with so many days of unalloyed happiness. The Baron and his son, with Zumstein, promised to accompany us on our way next day, as far as the châlets of Gabiet on the Col d'Ollen, our intended pass into the Val Sesia; and the former placed his house at Staffel at our disposal should we be turned back by the weather, when he and his family would come up to entertain and start us the day after.

The night was soft and warm, and we lingered outside till late, listening to the tinkling of the distant cattle bells, and the wild musical cadences of the shepherds; while the brilliant full moon bathed the valley in light, the dark gloom of the distant pines bringing out the silvered spire of St. Jean, and the lustrous snow and glaciers of the Lyskam.

CHAPTER XVI.

VAL DE LYS—VAL SESIA—VAL DI BOURS.

Col d'Ollen — Discovery of soldier's body — Gabiet See — The Gemstein — Mysterious tracks — Splendid panorama — Limits of French and Italian influence — Descent on Alagna — The curé — His ascents of Monte Rosa — Val Sesia and the Val Sesians — Vestiges of ancient glacier — Gold and copper mines — Torrente Bianco — Pile Alpe — Noble view of Monte Rosa — Rich vegetation — Riva — Church and frescoes — Descent of Val Sesia — Scopello.

WE were rewarded, after our patient waiting, by the return of brilliant weather; and, at 6 o'clock on the 24th of September, started just as the first amber tints, announcing sunrise, began to steal over the cloudless sky and the clear Lyskam. Baron Peccoz was unavoidably detained at Gressoney, having just received intelligence that one of his shepherds had discovered a soldier's body left by the melting snow, in a narrow glen at the head of the Val; and he had to go with the Syndic to view it. His son, however, accompanied us, and at Noversch M. Zumstein was waiting our arrival. We could not possibly have had a more magnificent morning. The rain had refreshed the valley, and given that peculiar clearness and distinctness which frequently follows it; the torrents and cascades were all foaming, and myriads of little silvery threads streamed everywhere down the dark serpentine rocks; while the colossal mountains of the upper Val were powdered with fresh snow far down their sides.

Passing La Trinité, we followed the track to Am Bett, turning off to the right at a little wayside inn, offering doubtful accommodation to the few travellers who pass this way. The ascent was not difficult, by steep green slopes, past Ursieu and Bodomie, and the merriment of our party

beguiled the way. Near the châlets of Riga, as Zumstein observed, the larch, the last "needle-wood," * disappeared; the rhododendron and juniper reaching a higher elevation. In his table of altitudes, appended to Von Welden's work, he has given the height of the respective ranges of the Alpine trees and shrubs in this district of Monte Rosa thus: the "Weiss Tanne" or silver fir (*Pinus picea*), and the Arve or Arolla (*P. cembra*), 6120 Paris feet; the "Lerchbaume" or larch (*A. larix*), 6840; the "Alpen Erle" or alder (*Alnus viridus*), 7158; and the "Alpenrosen" (*Rhododendron Alpinum*), 8880. Tschudi assigns the highest general range to the Arolla or *Cembra*, which accords with my own observations. He says, on the southern slopes of the Alps near the Stelvio, the Arolla, which will flourish on the glacier edge and endure the longest and severest frosts, is found at a height of 7883 feet.

Rough broken ground, strewn thick with wild blocks, brought us at last to the Gabiet Alp, where our friends were to leave us. The châlets were deserted for the season, and, not being able to effect an entrance into the very neat hut, promising excellent Alpine quarters in the summer, we seated ourselves in the warm sun on the short turf, while we made our lunch, having breakfasted at 5. On our way up we had splendid views of the Weiss Horn, the Roth Horn, the stern Grauhaupt, and, grandest of all, the abutting ends of the Monte Rosa group: on which Zumstein pointed out his route to the Zumstein Spitze; the gold-mines of Herr Vincent with the precipitous track up to them; and the brilliant snow dome of the Höhe Licht—conspicuous above the wide glacier fields, which strongly excited my desire to scale them. Below the smooth green Alp on which we were sitting, and between us and the wild rocky base of Monte Rosa, yawned

* The Germans distinguish forest trees by the characteristic terms of "Laubholz," or leaf wood, and "Nadelholz," or needle-wood; the latter comprising the Coniferæ, or pine tribe.

a dark ravine of which one could not calculate the depth, and it was at the bottom of this that the body of the soldier had been found. It was conjectured that he was a deserter, who, having attempted to cross the pass in the deep winter snow, unguided, had lost his way and perished; a catastrophe unhappily far too common on these mountains. His body had been discovered the day before by the shepherds' dogs, his feet protruding from a sunken snow drift. Zumstein and the young Baron, who would otherwise have accompanied us to the top of the Col, left us here to go and view the corpse; and after many hearty farewells they rapidly descended the Alp, while we resumed the ascent.

The lonely little tarn of the Gabiet See passed, we came to the fresh-fallen snow, which loosely filled the interstices between the rough huge blocks forming the last part of the climb; and Mora after sundry mischances became so frightened that E. had to dismount. Among the rocks were very fine masses of highly crystallized hornblende. The most charming little pictures imaginable were the scattered patches of gentians among these rocks. Their petals, uncovered by the warm sun, just peeped above the snow, on which they lay open in hundreds, like stars of an intense azure blue sprinkled over the dazzling white field. The boundary between the Val de Lys and the Val Sesia, a low wall of loosely piled stones, marked the summit of the Col, which we reached at 11 A.M., and caught an exciting glimpse of new regions.

We had plenty of time; and Baron Peccoz having strongly recommended us to mount the still higher point of the "Gemstein," as commanding a grand view of the Monte Rosa side of the pass, we tethered Mora in a comfortable snow drift and began climbing it. The newly fallen snow, which was here very deep and soft, made the steep ascent more difficult than usual; but we were all so much puzzled by the mysterious tracks of some animal, which led us in zigzags

to the summit in less than half an hour, that we forgot the labour. Delapierre, with all his mountain experience, was unable to recognise them, assigning them to unmentionable origin; but I took accurate sketches of some of the footprints, and, on showing them to several chasseurs afterwards, I was confirmed in my conjecture that they were the tracks of a bear.

The summit gained—a lofty exposed ridge of rock—the view was superbly grand, trite as words are to describe a scene of such vast magnificence. Forbes gives the height of the Col d'Ollen as 9758 feet, consequently the summit of the Gemstein must be considerably above 10,000 feet, and the view is proportionably extensive. Directly before us, with a wide valley of desolation intervening, was the colossal butt end of Monte Rosa in full face, with its rugged bases, and enormous pyramids of dark rock and cold dreamlike glaciers of incalculable extent; their frozen billows rent and crevassed, foaming down its deeply furrowed flank between huge overhanging cliffs; which were crowned by the glistening dome of the Höhe Licht, the Lyskam, and the Vincent Pyramide. A large rounded rock, half way down from the Höhe Licht, was an interesting object, being the spot where stood Vincent's cabin during his gold-mining operations and Zumstein's ascents of Monte Rosa. Behind us, the sunless crags of the north side of the Weiss Horn, savage and repellent in all aspects, were covered with fresh snow. To the west, the dark depths of the Val de Lys seemed as if light and warmth could never penetrate the profound chasm, shut in by many a familiar line of lofty Alps; with the "sapphire-hued pyramid of Monte Viso," and the summit of Mont Blanc in the far distance. In utter contrast to all this, far to the east lay the sunny land of Italy; on which—beyond bare ridges of deep brown, olive-green, and purpled peaks, shutting out the apparently still and lifeless valley we once more beheld the blue expanse of the Lago Maggiore, among

the far-spreading plains of Lombardy, marked with the silvery lines of large rivers, and the glistening clusters of Milan, Novara, and innumerable towns and villages; backed by the far-distant ranges of the Grisons and the Tyrol, and, towering above all, the huge Ortler Spitze.

We hardly felt the cold—little short of the freezing point—in the first excitement of the scene; but before long it became keenly sensible, and E. followed the example of Delapierre, who had ensconced himself in a snug sunny corner among the rocks, for a short nap. I was anxious to get a sketch of the southern side of Monte Rosa from this point, to complete a series of views of it from its different valleys; but almost before I had got out my sketch-book, the clouds, which continually haunt this end of the mountain, began to pack on the summits; and though they broke from time to time, I was baffled in all my endeavours to get any connected outline. But the invidious "brouillard," whirling down in dense masses to a certain limit, and again unexpectedly rolling off from varying points, added greatly to the wild and wonderful scene; as first one peak, and then another, appeared through a momentary opening, as if suspended in mid air. I gave up all hopes of a sketch, and devoted the remainder of our time on the summit to a farewell view of the many dominant points, which reminded one of the days so happily spent among them, or in their vicinity. Such were the icy streams of the Lys glacier, the Pointe de Combetta, and the envied heights of the Roth Horn and the Grauhaupt, with the passes of the Furca de Betta and the Bettolina. Again, far beyond the Marienhorn and the Col de Ranzola, were the glaciers of the Ruise de Bonch, above the valley of Champorcher, with the distant points of the Rossa and the Grivola. Over the dark line which marked the Val d'Aosta rose Mont Emilius and the lofty points between the Vals Tournanche and Ayas; and, beyond all,

the summit of Mont Blanc barely rising above the serried crest of mountains.

Turning from this wild Alpine scene of snow, glacier, and dark ridges, the sunnier lands to the eastward had a different but not less interest to us; as the greater part of it was an unknown region, and among its mountains and valleys lay the rest of our explorations. The lofty chain of mountains, which, as a huge spur of Monte Rosa, extends southward from the Col d'Ollen down nearly to Ivrea, forms a distinct and also a natural boundary between two regions, differing, not only in their physical, but also in their national relations. That on the western side comprehends the extensive Val d'Aosta, with its numerous ramifying valleys, drained by the tributary streams of the Doire, on the main course of which they all debouch. The affinities of that district are mainly accordant with the Savoyard type, from evident local and historical associations. The prevailing language is a Savoyard-French, affected more or less by an admixture of Romansch and Italian, which becomes the more evident in the lower Val d'Aosta, on approaching, by one valley after another, nearer to the line of demarcation. But on the other side of this barrier chain, the language, the habits, and the dwellings of the people show a marked change. And with obvious reason; the only intercourse of the region with its westward neighbours is by the Col d'Ollen, which brings it in connection only with the German colony of Gressoney: the few other passes over the ridge being unimportant. But to the eastward the communication is open with Italy; as the Val Sesia, the Val Anzasca, and the Val d'Ossola, with their concurrent streams, which swell the Sesia and the Tosa, all converge in Italian territory; the influence of which spreads upwards through these great arteries, as their waters descend to the main river, the Po: the fertilizer of the rich plains of Piedmont and Lombardy. From no point, perhaps, can so distinct a conception be

formed of the physical distinctness of the two regions, as from the Col d'Ollen; which is the more strongly impressed, when a few short hours' walk brings one down into the Italian Val Sesia. The head of one of the two branches of the Val Sesia, the Val Grande, lay at our feet; divided from the other—the Val Piccola, or Val Sermenta—by a bare ridge of singular mountains—the Cima di Moud, the Cima Carnera, and between them, and above all, the noble pyramid of the Taglia Ferro. At its extremity the Val Grande was shut out from the Val Anzasca by the Turlo mountain, joining the other chain to the flank of Monte Rosa. The pass over it to Macugnaga seemed uninteresting enough, apparently bare rock, and is most fatiguing and monotonous.

E, refreshed with a light slumber on the hard rock, joined me in watching the fitful clouds, wreathing and whirling in restless masses over the grand Monte Rosa, and distorting its vast features, so that for no two successive moments was their identity recognisable. All else was clear and sharp, even to Mont Blanc, not less than sixty miles distant, and from which we alternately turned to the blue Lago Maggiore; contrasting our memories of the grand icy glaciers, the thunder of the avalanche, the bare granite ribs, and wild and desolate valleys of the one—and the sunny softness of the other, the perfume of its orange and citron trees, its semitropical vegetation, and the dreamy luxuriance of gondola life on its placid bosom.

The last hopes of a fuller view of Monte Rosa were finally extinguished, and, after more than three hours of intense enjoyment of this sublime scene, we felt it time to be descending towards Alagna; and the more so as, from the much lower level of the Val Sesia, the distance is considerably greater than from the Val de Lys. We took a parting glance of the latter, grateful for the many days of pleasure it had afforded us; and racing at an irresistible pace down

the precipitous snow, quickly reached Mera, whom, by the way, I am sorry to say, we had entirely forgotten. She, however, seemed to need no sympathy, standing much as we had left her, and taking it very coolly; her nose powdered with snow, which she had been apparently munching.

The descent of the Col on the Alagna side was for the first part of it steep, rough, and without any defined track. Much of it was a "clappey" of rocks, many of them of fine green serpentine; and at a little distance were the ruins of miners' huts and the indications of the deserted mines. We were shut in on both sides by high and gloomy mountain walls, which seemed through the telescope to be singularly bare, and smoothed as if by glacier action; though, as Forbes, who passed this Col, does not allude to anything of the kind, I distrusted the appearance, and to examine them satisfactorily would have required a day devoted to the purpose. A heavy shower too surprised us, and made us quicken our loitering pace. The rough ground passed, we dropped down on a rich track of great botanical interest, green as in spring—with a lovely fern-fringed stream like a Highland burn coursing through it, among beds of rhododendron still in flower—and sprinkled with patches of the delicate sulphur-yellow anemone. The first châlets reached are those of Ollen, or, as they are called by the German inhabitants, Aaling Alpen—the Col being known as the Aaling Furke—and from this name Schott has jumped at the derivation of Alagna. The women and children (men there were none) all came out to stare, and the thinly-clad bairnies ran up the stone-covered roofs of their huts—where the goats were perched—to have a better view of us.

The last descent on Alagna was through woods of beech, alder, cherry, maple, and other deciduous trees, the sight of which was most refreshing, as it had long been unknown to us in such woodland luxuriance; tall rank grass, and a profusion of ferns sparkling with the late rain, completing the

freshness of the scene. Emerging from the wood, the view of the Val Sesia was charming, with the village of Riva and its church in sight, and Alagna just before us. Twilight rapidly closed in, as we wended our way among the wooden rails fencing in the meadows, and passed the brown wide-roofed German châlets dotted among them; when Delapierre brought us to the little inn of Alagna, close to the great campanile of the church, which was nearly all we could by that time see.

The "Albergo di Monte Rosa" afforded better accommodation than we had anticipated. The host was especially attentive, and we found a good, simply furnished sala and bedroom; though the latter was excessively dirty, having been used to house the goats in winter; and as little else than a rough brushing had been since done to cleanse or purify it, its state may be better imagined than described. The change from one side of the Col to the other was at once manifest; we were not only in Italy, but Italian was spoken by all, as well as German (Alagna being one of the German colonies); and it was a pleasure to exchange the wretched French patois intermingled with Romansch, as spoken in the Vals we had been traversing, for intelligible though anything but pure Italian.

We had an introduction from M. Zumstein to the curé of Alagna, who was the first to scale the Signal Kuppe summit of Monte Rosa. He came in after dinner, and the evening was spent in a most agreeable conversation on the various points of interest in the Val Sesia, and his ascents of the Signal Kuppe, or Segnale as it is called on this side; of which he has published an account in his 'Nozioni Topografiche del Monte Rosa,'—a copy of which he presented to me. Full details will be found in it, but a brief sketch of his various attempts may be of interest here, and complete the list of ascents of Monte Rosa.

Excited by reading the accounts of Zumstein's achieving

the summit since called by his name, he finally determined, in 1834, to make an attempt himself; and accordingly with four companions he slept on the night of the 26th of July at the gold-miners' huts at the head of the Embours Thal. At break of day they ascended the vast glaciers, from one plateau to another, over deep and dangerous crevasses; and reached at last the Grand Plateau, at the height of 13,128 feet, where Zumstein passed the night in the crevasse. Gnifetti described the view of the immense coronet of the nine highest peaks of Monte Rosa, which surrounded them, as magnificent beyond description, forming a deep basin within which they were completely shut in. At the lowest point, near the Ludwigshöhe, they suffered much from weakness and drowsiness, and two of his companions fainted. Determined to achieve the last remaining climb, and plant the "bandiera rossa" he had brought with him, on the summit, he took the two stoutest and boldest of the party on with him, and they continued the ascent with extreme fatigue. At the end of an hour's labour they were suddenly enveloped in dense clouds, and when just within reach of the object of their ambition were compelled to return; and, not without much risk, reached the foot of the glaciers. Here they were caught in a heavy storm of hail and rain, which excited great alarm for their safety at Alagna. The height they attained on this occasion was 13,400 Italian feet, and the ascent took fourteen hours. For a month afterwards he suffered from general ill health.

In 1836 he again resolved to make another essay to retrieve his previous failure (this time with five persons); and as they had before felt the ill effects of wine and spirits, they took no other beverage than water and vinegar. They rested for the night in the miners' cabin, and a cloudless sky favoured their start by full moon; followed by a calm clear day. They suffered much less than before, and had achieved all but half an hour's climb to the summit, when they found

they had forgotten to bring the ice hatchets, without which it was impossible to scale the last hard steep snow. To their mortification they had to return, a second time unsuccessful.

A third ascent, in 1839, was defeated by dense cloud supervening when half way up; but, like true mountaineers, nothing daunted, they waited their opportunity. In 1842 splendid weather favoured them, and, profiting by former experience, every possible contingency was provided against in the way of hatchets and ice-poles, tents, &c.; and their preparations being completed by a barometer and thermometer, on the 8th of August they set off, a party of eight, in high spirits. This time they took the way of the Col d'Ollen, instead of the Val di Bours, and halted at mid-day on the Gemstein. From here they descended, by a rough and dangerous route among rocks and deep abysses, to the Lafets Alp; and thence to a bare spot of rock by the Höhe Licht, not more than twelve feet wide; and, fortunately finding a suitable crevice ready made, were able to pitch their tent and pass the night, 2154 feet higher than the Great St. Bernard. Clad in winter robes they slept soundly, all but Gnifetti, who was too much excited.

Next morning, in a sharp frost, the first start destined to be successful was made. After many difficulties the grand plateau was reached, where they rested in the huge basin environed by the colossal points of Monte Rosa—all but on the southern side. A slow trying climb brought them eventually to the foot of the Zumstein Spitze, where they saw the famous iron cross still standing which Zumstein had planted there in 1820. Here several torpid bees were found, and a dry beech-leaf; Zumstein also notices the frequent occurrence of the latter at the greatest elevations on Monte Rosa. From this the remainder of the ascent up the north side of the Signal Kuppe was so steep, that their cramps and hatchets only enab[illegible] slowly to cut a staircase up it. At twelve o'cloc[illegible] [illegible]t on a sharp tooth

of rock. The "bandiera rossa" floating in the air announced their success to their friends far below, and the first "Viva il Re" was heard on the untrodden Signal Kuppe.

He fully confirmed my own observations as to the uncertainty of the effect of the rarefaction of the atmosphere, at different times, and in a different state of health, in the same person, and at the same elevations. All of them practised mountaineers and accustomed to long and fatiguing ascents, they nevertheless felt, even on such a gradual incline as the Grand Plateau, an extreme lassitude and difficulty of respiration unknown to them in lower regions. On the still higher elevations more serious symptoms, such as fainting, bleeding at the nose, and loss of appetite, attacked all, but in various forms. M. Zumstein, it will be remembered, relates that he and his party suffered far less, in fact hardly anything, on the much loftier summit of the Zumstein Spitze, than they had on the Vincent Pyramide. But each ascent seemed to diminish the liability to these attacks, and there seems little doubt that, from the wonderful adaptability of the human constitution to the most extraordinary extremes, it does in fact become accustomed, and comparatively insensible, to the condition of the atmosphere at these enormous elevations. Such at least would appear to be the case from the experience of our vigorous young countrymen, who, under favourable circumstances, and hardened by practice, have felt no other inconvenience on the loftiest heights of Mont Blanc and Monte Rosa than those incident to the mere physical fatigue of climbing; while guides and savants alike have suffered the most serious and indisputable inconveniences in the very same situations.

Our conversation turned subsequently on the Val Sesia and its inhabitants; regarding which, both his pamphlet and the 'Quadro della Val Sesia' of the Canonico Sottile, furnish much useful and interesting information. The province of Val Sesia is divided into two principal parts, the Val Sesia

Superiore and Val Sesia Inferiore, with a united population of 35,000. The capital of the lower Val is Borgo Sesia, and that of the upper Varallo. The latter, the Alpine district, in which we were more immediately interested, is subdivided into the three tributary glens of the Val Sesia Grande, the Val Piccola or Val Sermenta, and the Val Mastalone. It is remarkable that the usual sagacity of Napoleon should have so failed him in his selection of the torrent of the Sesia as the boundary of his newly-constituted French and Italian kingdoms; so utterly in opposition to all natural conditions, as will easily be understood from the remarks already made as to the limit between French and Italian sympathies; to say nothing of local features, such as generally influence the determining of a confine.

The Sesia preserves its name from the old Latin "Siccida," very applicable to its wide dry bed of shingly beach, as may be seen at and below Varallo and Borgo Sesia, and especially near Borgomanero. This is the more noticeable in the season when the absence of rain and glacier meltings reduces it to a shrunken stream. Surrounded on every side by lofty and all but impassable mountains, the Val Sesia has never been made, like its neighbours, the Val d'Aosta, or the Val d'Ossola, the highway for Roman, Barbarian, or European armies; and even during the vigorous feudal contests of the middle ages, preserved its independence almost intact. The unsuccessful attempts of the Counts of Biandrate, in the 13th century, by crafty schemes and royal favour, to obtain the feudal sovereignty of the Val Sesia; their discomfiture by the duped and indignant inhabitants, who had helped to build their castles; the signal failure of their transfer of the Royal Charter to the commune of Vercelli; and the ultimate siege and surrender of their strongholds, form an exciting passage in the history of the Val Sesians, which they have not forgotten.

Through various vicissitudes and repeated changes of

masters, this Val has still retained much of its old independence, and with it a distinct and republican form of government, which is jealously cherished. According to the Canonico Sottile,* its historian, it is perhaps the most ancient republic in Europe; and he affirms that no system of government could be more simple, natural, inexpensive, or more wise. This we may certainly believe, if, as he says, in their deliberative assemblies, "Buon senso parlava, il buon senso solo decideva!" A happy state of things indeed!—one to which I fear the deliberative discussions of our own country, from the High Court of Parliament to the humble country vestry, are never likely to attain.

It earliest constitution was, as now, a triennial council of deputies from all parts of the Val; who elected three regents, their office lasting three years, and after their term of office they were eligible for re-election. Each commune or parish regulated its own expenditure, much in the same mode as in our parochial system; except that their power amongst themselves was plenary in every matter of local administration. In their communal councils all expenditure whatever was voted prospectively; the necessary taxes being collected, not by a paid tax-gatherer, but each family had to take the office in turn. The secretary was the readiest penman present in the little council. Borgo Sesia and Varallo alone, from their size and importance, had paid officers, but at incredibly low salaries. This miniature republic preserves its liberty and privileges to this day, secured by its successive sovereigns, whom it regards rather as protectors than as masters.

The Val Sesians owe their exemption from State interference and State burdens to their local circumstances; and the very fact is of itself an indication of the real state of the district. A wealthy thriving province of such extent, with

* Quadro della Val Sesia, p. 68.

adequate resources, would never have been favoured with such immunity. The fact is, that the produce of the small proportion of its wild mountainous area which can be cultivated, would not suffice to sustain its inhabitants for more than two months in the year. Of cattle and sheep, which form their staple resource, but little is exported. Varallo produces some wine, but sour and thin. Chesnuts at least are abundant, but are almost entirely consumed at home; as with potatoes and polenta they form the chief food of the lower classes Those better off afford to live on the black bread baked once a year, with mountain cheese and a little salt meat.

The population of the whole Val Sesia being estimated at 35,000, it is evidently utterly unable to maintain a tithe of that number from its own resources. The necessary result is, a regular periodical migration of all the able-bodied and active males, for varying lengths of time, into different parts of Europe; as is the case at Gressoney and Ayas. The Valsesians are skilled masons, sculptors, builders, and painters; and the artists of Varallo—especially in ecclesiastical painting and frescoes—have had a wide reputation from a remote period. A large number of the towns of Italy and France, as Genoa, Milan, Turin, and even Paris, are supplied with an immense influx of skilled labourers and artificers from these Vals. Some idea of the extent of this migration may be formed from the fact that 8000 Val Sesians leave their homes annually, many of them for years. According to a recent census, made at the request of the Sardinian government, it has been found that in Lyons alone, there are no less than 20,000 Piedmontese workmen of various crafts; exclusive of men from other parts of Italy. At Marseilles there are 60,000 Italians, and in Paris itself probably double that number—a very large proportion of whom are from Piedmont. Throughout North Italy especially, I was told, on good authority, that the greater part of the waiters,

who constantly become, by their prudent and saving habits, hotel keepers themselves, are recruited from the Italian valleys of the Alps.

It is somewhat remarkable that in the Val Sesia—although the strong local attachment instinctive in all Highlanders brings a large proportion of these adventurers back to enjoy their gains with their families in their native valley—yet there are no external evidences of acquired prosperity, such as are so conspicuous in Gressoney, and all the other Vals we had an opportunity of visiting. No brightly painted châlets, with their carved wooden balconies and green venetians, or more luxurious villa of the retired merchant, are to be seen throughout the length of it; except perhaps at Varallo, or Borgo Sesia, or some solitary instance; and the houses remain unaltered, whether they are in the lower Italian valley, or the upper German commune of Alagna. The only conclusion is that the richer emigrants rarely return; preferring regions less forbidding in which to end their days, than their own narrow barren Val; where, as at Alagna, the snow often sets in early in November, lasting for six or seven dreary months, while hardly a warm day is known until July or August.

Gnifetti truly says that the houses at Alagna, which are all of German build—châlets entirely of wood—are constructed more with the object of housing their crops than with regard to the comfort or health of the inmates. The type of more than three centuries back is the model of the present day, and is never departed from or improved on in any way; as much from the fear of incurring the disapprobation of the community, as from a scrupulous adherence to the customs of their forefathers. And this is the more remarkable, as he says that every year about 140 men go forth into the outer world, as builders, masons, and plasterers; and therefore necessarily become familiar with every kind of buildings, and their construction and advantages.

The natives of Alagna preserve their German nationality as carefully, not only in their houses, but also in their language, as do the Gressoneyers; though their dialect is much less pure than that of the Val de Lys. Schott, who paid very minute attention to the various dialects of the different German Vals of Monte Rosa, classifies them thus, according to their various degrees of purity: 1st, Macugnaga, where their vicinity to and constant intercourse with the Valais has a direct influence in preserving it. 2nd, Gressoney, less pure in the instance of Issime, where the German is affected by an admixture of Romansch; while it is a singular fact that the district of Gaby, between Issime and Gressoney, is chiefly Italian. 3rd, Alagna and Rima. 4th and lastly, Rimella: the most corrupted by Romansch and uncorrected usage for a long period.

It is creditable alike to the people and their worthy pastor, that the latter can say of them, that there is not a man or a woman to be found in Alagna, who is not able to read and write to some extent. Their sons, who are intended to migrate and learn their trades in foreign countries, receive, moreover, instruction in French, accounts, caligraphy, and the elements of drawing, so useful in their various crafts.

The principal produce of Alagna is sheep and cattle; the very contracted valley affording little room for cultivation. A thousand cattle, as many sheep, and about 500 goats, find rich pasture in the summer on the various "alps;" but, as the hay stored up for winter use will not feed more than half this number, in the winter months, from October to May, the other half are lent to the country people about Borgo Sesia. We had greater facility in procuring meat here than in any other Val we had been in, except the Val de Lys; and it is accounted for by the fact that all who are in tolerable circumstances eat animal food; generally an unaccustomed luxury elsewhere. Every year, in the month of October,

they kill and salt down, among the different families, about ninety pigs, fifty beasts, and 400 sheep and goats, which will keep good for more than a year. This diet certainly does not disagree with them, as I never saw a more thoroughly healthy or noble race of people. Delapierre did not neglect the opportunity of obtaining a quarter of fresh mutton for our future use, which was to be sent after us.

In the course of conversation, the curé spoke with regret and dissatisfaction, of the hasty way in which our countrymen rushed through the Val Sesia, without caring to see any of its hidden beauties; and he was so much pleased with our wish to penetrate towards the head of the valley, that he gave up a previous engagement and offered to accompany us next day. The point he proposed was the Pile Alpe, in the Val di Bours, from whence he described the view of the Signal Kuppe and Parrot Spitze as extremely grand.

Fortunately the morning was again cloudless and brilliant, and the curé was ready waiting for us at 6, when we ascended the valley by the path leading to the Turlo Pass. On descending to Alagna the night before, I had noticed, but indistinctly, the remarkable mounds of enormous size, down which the path led from the Col d'Ollen. Their conformation and position seemed to indicate that they were ancient moraines; but it was too dark then to come to any conclusion. Now, on observing them in face, from the narrow bank of the torrent into which their sloping fronts almost plunged, it appeared beyond a doubt that they were true glacier deposits. I am not aware that it has been noticed before, but three well-defined moraines, at least, if not four—of very great height, especially that on the north, descending in long parallel ridges down at right angles to the valley bed—indicate the former existence of a vast glacier, which must, at some remote period, have filled up the whole of the Val d'Ollen, from the summit of the present Col down to the Sesia. I have remarked, that, on descending the pass,

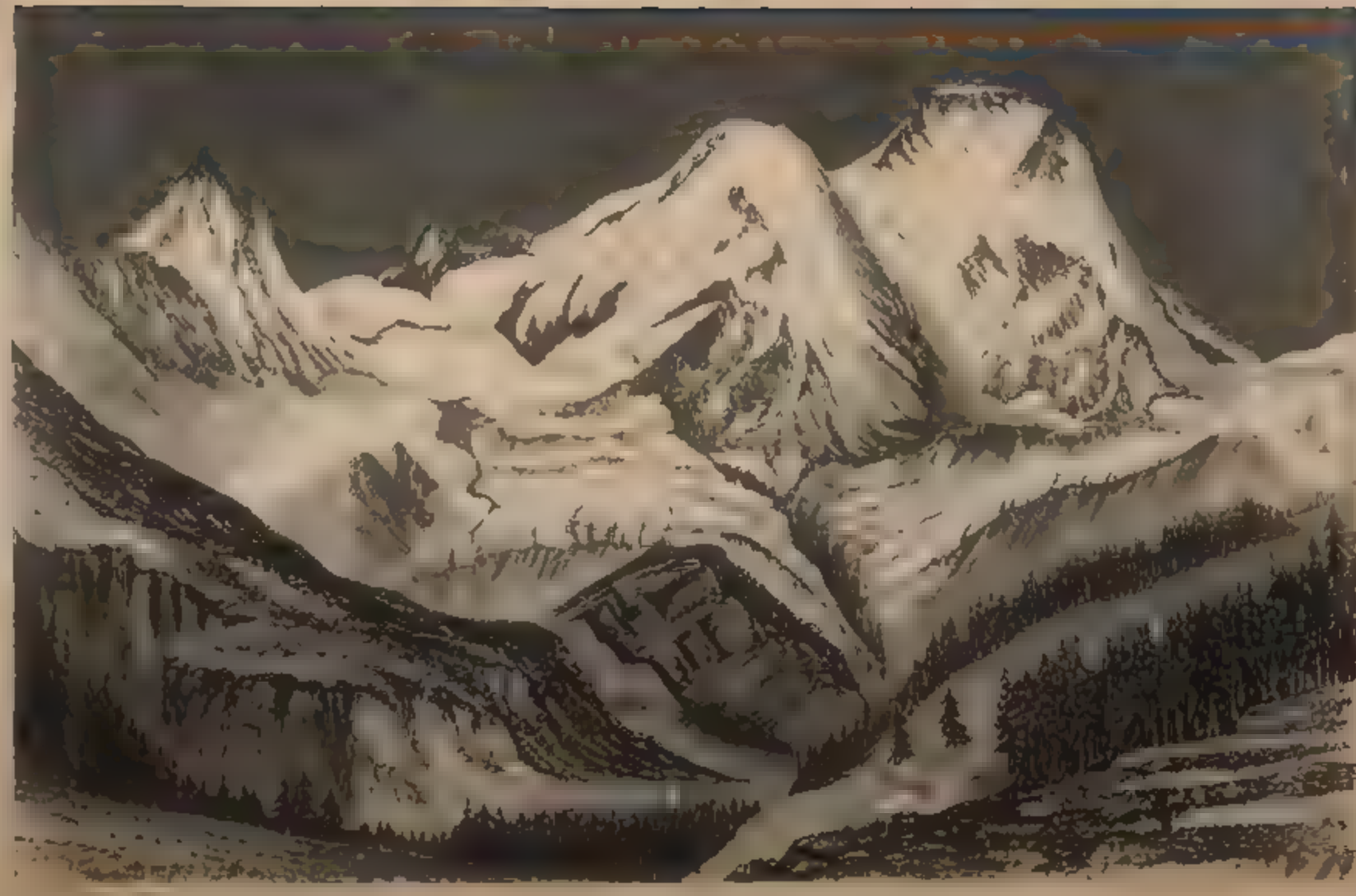
I observed what appeared to be traces of glacier action on the higher rocks.

These vast sloping ridges consist of a débris of soil and blocks, the surface of which has long since been cleared, and the rocks and stones gathered and piled, so as to form terraces—on which were gardens, fine crops of hay, grass, and some corn, and on one a picturesque little oratory. Below they were thickly studded with the finest deciduous trees. From the "alp" on the opposite mountain side an excellent view might be had, which would show more clearly the arrangement of the moraines; and an examination of their respective materials, in the walls collected in the moraines themselves, would soon satisfy any one acquainted with the formation of the upper valley, as to their origin. At the foot of the southernmost—not far from the lower copper-mines of Alagna, and among a number of transported blocks lying here and there in the meadows—is one larger than the rest, in which a door may be seen. The block is of such size that a chamber has been excavated in it, and was used as a powder magazine by the government at the time when they worked these mines.

The scenery of the valley was charming; like a narrow Highland glen, contracting as we advanced, and strewn with an immense quantity of huge blocks of granite, gneiss, syenite, and other rocks. The rugged pile of the Staffelberg, or Stofulkorn, rising high on the left, confers a great benefit on Alagna, by sheltering it from the direct cold of Monte Rosa, and thus greatly raising its temperature. In the sides and at the foot of the Staffelberg, copper and gold mines were formerly worked by government, but abandoned when no longer profitable. The ranges of buildings, the old "stabilimento," were deserted and falling to ruins, and the roof of one had been crushed in by an avalanche that year. After government ceased working them, the mines were let to a private speculator, at a certain percentage on the metal obtained, but did not pay expenses.

They had been lately purchased by a "Compagnia Anonima," which had recommenced working them the year previously; one of the buildings was restored, where we found men at work crushing the ore which had already been obtained. In one corner lay piled a heap of lead and silver ore, apparently rich, but mixed with a considerable proportion of arsenic, as evidenced by its less lustrous grey colour among the polished blue lead ore. In another part was a heap of white quartzose rock, in which were sparkling crystals of copper pyrites, which the men fearlessly asserted were all pure gold. They were at work on the lead and silver ore, breaking it up with hammers, crushing, washing and making it into a paste which was dried on a rude kiln. The result in the form of a black powder was sent down to the foundries in the Lower Valley. The entrance to the old gold-mines is a little further up, by a low arched tunnel which penetrates a great distance into the heart of the mountain; and we were told it was a good day's journey to explore its ramifications.

After leaving the mines we had to thread our way along the bank of the stream, among a labyrinth of rocks of enormous size and most picturesque grouping, sometimes meeting over our heads, and thrown together in wild confusion, as if torn off from the Staffelberg above. High up its craggy sides a reddish spot marked the entrance to the new lead and silver mine; and the echoes of successive reports of blasting thundered among the mountains. The boulder-choked torrent was crossed several times by crazy wooden bridges; and at about an hour's distance above Alagna a path led over another bridge to the Turlo pass. Just above it were the entrances to mines belonging to Count Belliani of Varallo, but unproductive. The Turlo Col over into the Val Anzasca, declared by Forbes to be one of the most tedious passes in the Alps, is, moreover, most uninteresting—Monte Rosa being hidden—so that we



MONTE ROSA FROM PILE ALPE—VAL DE BOURE

were glad to lose nothing, as our plans obliged us to go round by the Val Sermenta to Rima; near which we hoped to be able to get over a pass, called the Col d'Egua, into the Val Anzasca.

Climbing up a steep staircase ascent—rudely cut in the rock above the stream—the beautiful cascade of the Torrente Bianco, on the opposite side, dashed down, in full force, from the bare Turlo; in a series of broken leaps from side to side, on the zigzag edges of the strata, against which it looked like liquid silver. When full of water as we saw it, it is a beautiful fall, and conspicuous among the numerous picturesque cascades in the Val.

The rocky steps now led us up towards the green carpet of the Pile Alpe at the entrance of the Val di Bours, when suddenly a glorious burst of the summits of Monte Rosa gleamed through the feathered branches of the larches; and passing through the little group of châlets, we seated ourselves beyond them, in the midst of a green turfy basin, surrounded by a truly marvellous scene. When our friend the curé, pleased at our unfeigned delight, repeated that he had never known any English visit it before, we could not wonder at his regrets that one of the finest scenes in the Alps should be so little known, and only two hours from the inn at Alagna.

In front of us was the Queen of the Alps in unclouded majesty, a sublime scene indeed, and the view of it so changed from that of the day before, that it was hardly recognisable. The head of the Val di Bours was here shut in by the colossal domes of the Signal Kuppe and Parrot Spitze, presenting a stupendous wall of precipice, with the wild Sesia glaciers at its base. On the left flank of the Parrot Spitze appeared the minor points of the Ludwigshöhe and the Schwarzhorn; and more to the left again, a pyramid, recently named by the surveying officers the Victor Horn: merely a part of the Vincent Pyramide, the true summit of

which it shuts out of view. Nothing could be more magnificent or imposing than the view presented by these wonderful masses, from the lovely "alp" on which we sat, hemmed in all round by mountain sides and glens wooded with pine forest. Their intersecting bases, descending into a deep valley, formed a noble foreground to the more distant Sesia Glaciers, bedded on enormous sloping moraines. Between them on the left intervened the grassy mountain-shoulder of the Alpe delle Vigne, from which the curé said there was a still more extensive view; while to our right the torrent formed a waterfall, tumbling into a deep ravine fringed with lovely ferns.

This "alp," though one of the most luxuriant we had seen, is only occupied for a fortnight in summer, and again for the same short period in September. It was a charming scene of pastoral activity; the women and children—who tend the cattle, make cheese, gather leaves for the goats, and carry everything up and down the valley—were engaged in mowing the sweet short hay, full of succulent herbs; looking after the vagrant cows; and busily plying their distaffs. The flies teazed the cattle, and the scenes which constantly occurred were very amusing, as one cow after another, maddened by their torturers, dashed off, tail erect, at a furious gallop; pursued with desperate vigour by the women, who generally, after exhausting the many familiar and endearing epithets applied to them, had recourse to a stout cudgel. The cattle evidently knew, and were personally attached to their mistresses, more like dogs than dull cows; coming up to them and rubbing their noses against them, to make peace after their freaks.

We were extremely struck with the remarkably handsome features, fresh clear complexions, and fine natural forms of these fair shepherdesses. There was hardly a plain one amongst them, old or young; and most would have attracted attention anywhere. A finer race of people it would be difficult to find than those we met with here, and in other parts of the Vals Sesia and Anzasca.

The curé showed us the point on which his flag had been seen from below, on the day of his successful ascent of the Signal Kuppe; from the summit of which it continued to float for a month, a triumphant proof of the achievement. A singular superstition is current with regard to the wild glaciers which wreathe round the bases of these icy summits. Strange wails and mournful cries are often heard issuing from their awful fissures; which are believed to be the moans of lost souls, condemned to expiate their sins in the bowels of the ice. So fixed is this belief, that often many persons in a year have been known to make a weary and dangerous pilgrimage on the lonely glacier; where, on their bare knees, they have offered long and earnest prayers for the liberation of the unhappy souls, and also for their own deliverance from such a fate; imagining that either in life or after death they must expiate their sins by visiting these dread regions.

I tried one sketch after another, utterly unable even to approach the grandeur of the subject, which seemed to require yards of paper and weeks of labour to convey even a tithe of its sublime vastness. E. meanwhile climbed the rocks and hill sides in search of plants and ferns, which grew in profusion among the moist luxuriant thickets of rhododendron—which, with the yellow globe ranunculus, the white monkshood, sweet-scented pinks, and a host of other flowers, seemed only just in full bloom. Among the ferns were the *A. filix-mas*, *A. filix-fœmina*, and *Lastrea dilatata*, most abundant and of gigantic size, and which, strange to say, we had hardly found in any of these Vals previously. The dark shining fronds of *A. lonchitis* were literally black on the under side with the dense fructification. *Asplenium viride* had also rarely occurred before; and on coming up the valley we had found near the gold-mines—and the only time we saw it growing—a fern quite new to us and of very distinct habit, the name of which I have not been able to determine satisfactorily.

It was of the character of *Polystichum aculeatum*, but soft and delicate, of a pale silvery green, and of flexile habit. An eminent botanist, to whom I showed it, considers it nearest to the *Polystichum Braunii*. *Polystichum aculeatum*, I may add, never occurred but in two solitary instances in all our tour, and those of true typical form. *Lycopodium selago* and *selaginoides* were plentiful, and the delicate green *L. helveticum* literally carpeted the mountain sides. The children brought us huge bunches of bilberries, the juicy berries of which were of unusual size, their rich purple-bloomed fruit almost more profuse than the shining leaves. The mothers pressed on us fresh curds and abundance of thick cream; and altogether châlet life presented a more alluring aspect in that enchanting spot than it had ever done before. It was late in the afternoon when we unwillingly retraced our steps to the Albergo di Monte Rosa at Alagna, where the curé dined and spent the evening with us.

We had been fortunate in the weather. The next day heavy mist canopied the valley until after midday, when it cleared; and we walked down the Val, Delapierre and Mora following with the baggage; Gnifetti accompanying us to Riva to introduce us to the curé there. On our way we passed and examined the copper-mines, where they were commencing active operations, having opened a fresh vein; and a large quantity of ore was already extracted, contained in greenish quartzose gneiss, much like that of Ollomont. Half an hour took us down to Riva, through charming meadows, where they were busy making hay, and it seemed perpetual midsummer, as we had never long been without seeing it since June. The beautiful view now appearing above the Staffelberg, of Monte Rosa towering over the head of the valley, showed the Signal Kuppe and Parrot Spitze, with the Vincent Pyramide and the Weisshorn to the left.

The scene from the commanding platform on which Riva is perched is splendid, and one of the best points is the piazza in

front of the church; which is very large and handsome for such a mountain hamlet, of not more than 700 inhabitants. The façade is almost covered with fine frescoes representing the Last Judgment, painted by Melchiorre d' Enrico; the last of the brothers of that name, celebrated fresco-painters of the Val Sesia in the sixteenth century; who were known as "I Tanzi d'Alagna." The purity and dryness of the bracing air of the upper Val Sesia, is shown in the singularly fresh and vivid condition in which these out-door frescoes exist, after a lapse of some three centuries. The lower part has been injured and badly restored. They well repay a careful study, being the work of no mean artist. The summit of one of the towers was only just repaired, having been thrown down by the violent earthquake of July 25th. While Gnifetti was hunting for the curé of Riva—a great naturalist, and who had a collection of the wild plants of the vicinity which we wished to see—we seated ourselves in front of the church; alternately fixing our attention on the rich mediæval quaintness of the old paintings, and the sublime natural picture of the enormous snowy mass of Monte Rosa, framed in its rugged circlet of wild mountains.

Not a soul was to be seen in the lonely narrow street of Riva; every one was out in the fields; and when Gnifetti returned to us, after an absence of half an hour, he told us the curé himself, as all his flock were scattered, had taken his rifle and gone to the mountains; being a great chasseur, as so many of the priests of these valleys are. Their small congregations are dwindled to a handful in the summer, by the migrations of the men, and the ascent of most of the women and children to the mountain pastures. The schools are then closed, and, having no families nor establishments themselves, few books procurable, and no society, their time would often hang heavy on their hands, but for some such active vigorous pursuit. Their wanderings in the mountains often bring them to the scattered "alps," where they occasion-

ally make their head-quarters with some of their parishioners. Such rambles afford great advantages to a naturalist, and we much regretted not being able to see the curé of Riva, and inspect his collection. Here at length our good friend had to leave us, with our many sincere thanks to him, and hearty "addios" on both sides.

A rapid descent took us down again to the valley, from the verdant ledge on the hill side, where Riva looks from a distance like a miniature castellated city. Behind is the opening leading up to the Col de Val Dobbia and Gressoney, a pass of little interest compared with the Col d'Ollen. The summit of the pass is 8200 feet above the sea. The valley, for some distance below Riva, loses its pleasant verdant character, and is wild and stony, without cultivation; the mule path rough; and the torrent forces its way through a desolate bed of rough blocks, enlivened only by a few alders. I found *A. germanicum* plentiful on the rocks, and gathered a number of fine rooted plants, which reached England safely. The beech-trees which form the chief wood of the upper valley, as we approached Mollia, were already tinged with the first red and yellow colouring of autumn. Spanish chesnuts soon mingled with the beech, and at Campertogno vines once more appeared. We stopped at the little inn at Mollia to reconnoitre its accommodation, which was very good and clean, and the people were very civil and anxious for us to stay.

From Piode a new char-road was in course of construction down to Scopello and so to Varallo. It is ultimately purposed to carry it up to Riva, which will greatly facilitate the traffic of the Val Sesia, and also render it easy of access to the traveller But I confess that, notwithstanding its advantages, we both much preferred the old rugged mule track to the easy broad carriage road; which, like a railway, obliterates so much of the natural character of any scenery, especially in the mountains. At Piode the valley opened out,

and coming as we did from Alpine regions, seemed beautifully rich, with its bold mountains wooded to the summits. The Sesia, which flowed at the bottom among meadows and green banks, was here a wide river, broken into a succession of beautiful pools and rapids, and made me at once look after the safety of the fly rod, which had luckily not been forgotten. Three hours and a half brought us to the prettily situated village of Scopello, and Delapierre got us quarters at a second-rate inn, where we could hardly find anything to eat, or get any attention but our own.

CHAPTER XVII.

VAL SESIA.—VAL SERMENTA.—VAL OLLOCIA.

Fly-fishing in the Sesia — Future route — Deserted foundry of Scopello — Start by moonlight — Scopa — Balmuccia — "Osteria" — Rock-blasting — Peasants' costumes — Buccioletto — Singular obelisk — View of Fervento — Dahlias — Arrive at Rimasco — Excursion to Rima — Taglia Ferro — Situation and people of Rima — Church and charnel-house — Funeral procession — Carcofaro — The curé's garden — Cures and revenues of Church in Piedmont — Col d'Egua — Lost in mist — Perilous situation — Rescue — Scenery of Val Ollocia — Foresta — Timber shoot — Night — Banio — Festival and illuminations — Ponte Grande.

BEFORE leaving our quarters at Scopello, I devoted a day to fishing the Sesia; more for the sake of quietly enjoying the change of the river scenery and a day's rest, than with any great expectation of sport, as the season was now so far advanced. A grey morning and a good breeze promised well as I threw my fly on the tail of a deep pool which swept below the road; but the trout rose shyly, and the best fish I hooked broke me, whilst clambering round some awkward rocks. As the day cleared and the sun shone out they almost ceased rising; but I wandered on up the stream, skirting the orchards and green meadows along the varied banks, or over wide beds of bare boulders; and, as the sun grew hotter, wading deep in the cool refreshing river, to the horror of some Val Sesians who were looking down from a narrow picturesque bridge high overhead.

The scenery, though not grand, was beautiful; and the river—which seemed made for fly fishing, with open banks, and abounding in deep holes, eddies, rapids, and large rocks, such as a trout loves—would, I have no doubt, from what I saw, afford excellent sport at the right season. The trout

are slightly pink fleshed, and silvery, with much smaller spots than our burn trout, of very good flavour, and fight furiously for their size. For a wonder, the Val Sesians are fishermen, and supply many of the neighbouring valleys. The excellent dishes of trout which Delapierre provided for us daily during our stay at Gressoney were procured from here, and brought by his men two or three times a week over the Col de Val Dobbia, at considerable trouble;—they are, however, not up to fly fishing, either netting or angling for them in the deep pools, with a worm and fine gut line on a two-handed bamboo rod, 16 to 20 feet long. In the grey dawn they are generally most successful.

E. accompanied me along the banks, resting to read on the big boulders of granite; and in the heat of the day we retreated under the shade of a group of umbrageous sweet chesnuts in a beautiful little rocky nook, where we dined on eggs and bread, with walnuts and delicious late peaches, which Delapierre had managed to procure for us; after which we held council over our maps as to the next day's route.

We were now within a short walk of Varallo, our only "poste restante," and the point to which our spare baggage had been sent on from Ivrea by Biella. Letters we hardly expected; and as to our garments, their weather-worn and travel-stained condition had become so familiar and natural, that it seemed a useless luxury to replace anything; unless it were my boots, which were seriously dilapidated, but after being patched up and well clouted for the sixth time, with stout nails, they seemed likely to hold out for another week at least. The deep blue sky promised fair weather, and we finally determined to complete the tour of the southern side of Monte Rosa, as we had originally intended; exploring the Val Sermenta, or Piccola as it is called, and visiting the German villages of Rimasco and Rima; crossing from thence, if practicable for the mule, over the little-known pass of the Col d'Egua, into the Val Anzasca—there being no other

access to it from this side without making an immense détour, as the Turlo is quite impassable for mules. Delapierre told us he had once crossed it on foot, and felt sure his mule could do it. At all events the adventure just suited him, and we determined to attempt it; which settled, he returned to Scopello to make his arrangements.

E. spread out her portable writing materials on the grassy bank to indite a letter home, to be forwarded from Scopa; and, after trying a sketch, I continued my piscatorial dreams like a lazy heron along the banks of the Sesia. It was late in the evening, after a day of thorough enjoyment and comparative repose, when we returned to our quarters, which were not very attractive. The inmates were, as Delapierre stigmatized them, "bêtes," very different from the well-bred kind-hearted Gressoneyers; so nonchalant that we could hardly have got anything to eat but for him, and so intrusively curious and impudent, that it required some firmness and strong practical hints to keep our room tolerably to ourselves. The charge made for our entertainment was, as we had expected, in an inverse ratio to its excellence, and I had to reduce it to reasonable proportions, by writing out a bill of my own, which was accepted without remonstrance. After all, this little "albergo" would afford very tolerable quarters for a fisherman, who does not trouble his hosts with much of his presence or many wants.

When we rose at four next morning, the moon shone brightly in a cloudless sky, and there was a sharp autumnal frost, the first of the season, which made itself keenly felt in the morning air. While Mora was being saddled and the baggage adjusted, we visited the deserted smelting works, just below the inn, near the river side—where the copper ore was formerly brought down from Alagna to be reduced. More than a thousand quintals of rose-copper had been the year's produce at the time of De Saussure's visit. The ore, ground down to a coarse powder, was mixed with lime, and

made into a paste, which was pierced with holes to admit the action of the fire. A tolerably rich ore of silver also was formerly reduced here. The foundry buildings were on a large scale, and the great furnaces, and blackened walls and rafters, now silent and deserted, looked in the moonlight like the ancient haunts of some grim Cyclops. The walls outside were covered with a profusion of *Asplenium ruta-muraria*, in dense fructification.

We were too glad to get away from our host's door to wait for the proffered but most doubtful "colazione," preferring to trust to wayside fare; and Mora trudged as briskly as ourselves along the broad even road, which continues from Piode down to Varallo; a novelty to us at first, coming from the mountains, but, after an hour or two, most wearisome. Delapierre had received the quarter of Alagna mutton at Scopello, which now graced E.'s saddle; and a solitary "cacciatore" astir at that early hour, on his way down to Varallo, overtook us with a bunch of "game," consisting of a brace of plump woodcocks, mountain thrushes, and, I am sorry to say, two robins; which, after some ingenious bargaining on his part, we secured for two lire, or about twopence a head—robins included. With these, and a stock of bread and some of the fresh trout from the Sesia, we had no fear for the provend, whatever quarters we might have to take up with in the Val Piccola.

We passed through the quiet clean little street of Scopa while its good people were still slumbering. A partial mist came on at sunrise, but the scenery of this part of the Val Sesia,—though beautiful in itself, and presenting romantic points where the fine river forms a noble feature,—was tame after what we had been traversing. Autumn was more advanced than we had yet seen anywhere, owing to the greater warmth of the valley and its much lower level, which is not 2000 feet. In the copse-woods above Alagna, on the descent of the Col d'Ollen, and at the Pile Alpe, not

a leaf had changed colour; but the ripening influence of the warmer temperature of the lower valleys was here strikingly evidenced. On the grassy orchard slopes along the road, great numbers of pumpkins trailed their long vines, laden with huge green, and golden-yellow fruit: while the low grounds at the bottom of the valley waved with crops of tall hemp, the chief produce.

Passing round and under a lofty mass of fine gneiss, which juts out into the valley across great part of its width, we soon reached Balmuccia, a picturesque village beautifully situated at the mouth of the Val Piccola. From a narrow gorge the Sermenta issues in a considerable stream, then of the most remarkable translucent green, and spanned by a fine bridge, below which it joins the turbid volume of the Sesia. The houses, like the people, were thoroughly Italian; and the change in this respect, and in their dialect, is most marked on this side of the Col d'Ollen: that spur of Monte Rosa forming the boundary, as before observed, between the Savoyard and Italian populations of the Vals. The Val de Lys is indeed in a transition position, while the communes of Gressoney and Alagna, at the foot of the Col d'Ollen, on either side, are ancient German; a most singular and almost unique combination, and often perplexing to travellers.

In the gay gardens which overhung the street were growing a profusion of remarkably fine dahlias in full bloom. Balmuccia has no inn, nor apparently any accommodation whatever for travellers, and we stopped at the only place we could find; a little "osteria" at the end of the bridge, combining a barber's shop with the sale of sour wine; a very unpromising-looking locality for hungry appetites, whetted by an early morning walk in the frosty air. In a dirty room, open to the road, a number of labourers were waiting their turn to be shaved; and cooking their own messes, chiefly a greasy "minestra," which seemed little more than a weak solution of haricots and grated goats' cheese, washed down with exe-

crable wine. The padrone, an independent individual of an indolent turn, was in no hurry to attend us, treating us as intruders. No coffee was to be had, but we made ourselves at home; Delapierre contrived to get some eggs, which, while the hostess growled, he slipped into the boiling soup; and, with them and our own bread and salt and a bottle of "birra gazeuse," we appeased hunger.

The excellent roads which the Government is wisely making, or encouraging the several communes to construct, —thereby opening up these remote yet populous valleys, and bringing them into communication with the rest of the kingdom,—are among the many proofs of sagacity and foresight it has shown; and the effect will be incalculable, not only on the local traffic, but in rendering the exquisite scenery of these glens accessible to ordinary tourists. A branch of the main road then in progress up the Val Sesia was just commencing in the Val Piccola; and gangs of workmen were busy on the rocks on the other side of the Sermenta, boring the hard gneiss for blasting. We had taken possession of a little vacant side room, directly facing them, and, hearing an alarm, I looked out, just in time to see the miners running away, and to push the Venetian shutters to, when a violent explosion shook the whole house, hurling a quantity of fragments against it, with startling effect. The windows were broken from previous blasts, but I suppose they had compensation for the damage, and as to ourselves it was of no consequence,—at all events we now discovered why we had the little room all to ourselves!

After satisfying the padrone with more than he expected, and advising him to be more hospitable in future, we quitted the Val Sesia a little below the bridge, glad to leave the high road and take to the mountain track once more. We took the old path by the rocks up the Val Sermenta. E. mounted, and Delapierre engaged a very pretty intelligent

girl of sixteen, to lighten the mule by carrying some of the extras, which, in the shape of specimens and collections of all kinds, had accumulated greatly. We were thoroughly accustomed by this time to seeing the women doing men's work, and carrying the heaviest burdens; but I thought it too much for so young a girl, and hesitated to allow her, until she laughingly slung the deep conical basket over her shoulders, and tripped lightly up the rocks bare-legged; her well-developed muscles and easy steps showing how well she was used to it. Her dress was a very short blue petticoat, barely reaching below her knees; a low scarlet boddice, buttoned in front; and a snow-white shirt of bleached hemp, with full sleeves and a lace frill, and open insertion on the shoulders; a red kerchief knotted behind her head "à la Grecque;" and a loose outer jacket of blue cloth. The costume of most we met in this Val was similar, very many wearing in addition trousers of blue cloth; a blue kerchief on the head; and sometimes a scarlet hem round the bottom of the blue cloth petticoat.

As we ascended we met a great number of peasants, nearly all women, bringing down loads of timber, charcoal, &c., on their backs. There were three or four distinct costumes, but all extremely neat; and even the charcoal carriers, in spite of their black loads, had shirts of snowy whiteness. Most of them, of all ages, were strikingly handsome, darker complexioned than the Gressoneyers, and their figures erect, full, and gracefully muscular. The weights they carried, stepping with apparent ease and even grace down the rugged descent, were astonishing. Delapierre surprised us at first by accosting each in her own patois, German or Italian; their costumes enabling him to distinguish the natives of the various valleys. We met a string of heavily-laden mules and horses, almost covered up with planks, among which he recognised one which he said he had sold at Gressoney

some six years before; and, on closely questioning the astonished muleteer, it turned out to be the case, as he traced its changes of ownership.

The Val Piccola is extremely contracted and narrow—more like an irregular fissure—with hardly any space for cultivation, and for the most part none whatever; from which peculiarity it derives its name, in contradistinction to the Val Sesia or Val Grande. The scenery was exquisitely rich and beautiful, the rocky cliffs of rugged granite being almost continuously clothed with fine wood, of walnut, chesnut, beech, and pine. It was a glorious September morning, and the first autumn tints on the hanging forests gave the finishing touch to the scene, which we enjoyed the more after the tamer Val Sesia, and the wild bleak spurs of Monte Rosa.

The street, if it may be so called, of Buccioletto, the first considerable village we passed through, was as narrow and irregular as the valley itself, and seemed deserted by the inhabitants; the male part of whom were in the mountains, while we had met the women going down the valley with their loads. The rocks were chiefly of a beautiful gneiss or granite, generally concealed with forest, but bleached white where it showed itself in the rugged bed of the stream—a succession of little cascades and abounding with trout, though the deep ravine at the bottom of which it runs is in great part inaccessible to the angler.

Between Balmuccia and Buccioletto the new path was blasted through a considerable vein of finely-crystallized hornblende, similar to what I had found on the summit of the Col d'Ollen. High on the mountain above Buccioletto a singular isolated obelisk, of immense size, is a most remarkable object, rising like a tower into the air. The mountain itself is shivered into huge fragments by some violent convulsion, and this enormous mass seems one of them; rent from the living rock, and arrested in its down-

ward course, it remains a monument of the awful crash. A few larches growing on the summit of it appeared small in comparison.

At one of the endless turns, the track brought us abruptly to a most striking view down into a wide basin, where the valley opened out, the path being carried high up the hill-side. On the brink of the precipice was a little half-ruined oratory, all its altar-decorations gone and defaced. A lean-to roof stretched across the road, resting on pillars on the parapet, and sheltering a rude stone seat, apparently commanding the best point of view. A coronet of wooded hills surrounded the beautiful amphitheatre, down in the bosom of which were dotted some forty houses, bright and picturesque-looking, composing the village of Fervento; in the centre of which, and facing us, the white campanile of the little church stood on a high jutting rock. From a dark rift below it, a foaming cascade burst forth from deep shade into the bright sunlight. The basin into which it fell and the deeper pools of the stream were of the most exquisite green, like the purest aquamarine, and so brilliantly clear that the very pebbles at the bottom could be seen from where we were. Its purity is owing to the absence of glacier-water, almost the first exception we had met with to the unvarying turbid streams of melted ice and snow which stream from the Pennine range, but I was at a loss to what to attribute the singularly beautiful green colour.

About Fervento there was more cultivation, and one or two little gardens were gay with dahlias, which seem to flourish even at these high elevations, if in sunny aspects. It is a remarkable fact how rapidly this flower—which, in its original unimproved state, was only introduced from Mexico to Madrid by Humboldt in 1789—has been transformed by art from an insignificant nearly single bloom to its present noble form and beauty of colouring, and has found its way into these remote valleys, where hardly any other flower is grown.

The Val Sermenta was, for the length of it, one of the most romantic, in its combination of forest-clothed rock and bright streams, among the many we had traversed. Its especial character is that it is so tortuous in its course and at the same time so narrow that it forms a series of continuous deep bends, each seeming to be shut in by a complete barrier of wooded mountains and having its own peculiar features and beauty. Just before arriving at Rimasco the valley became more open, with hilly pastures.

At noon we reached the village, without any other adventure than another and very nearly serious attempt on Mora's part to indulge in a roll on a tempting bit of greensward—the first smooth ground we had passed—on the very edge of the deep ravine, into which E. must have been precipitated. This irresistible propensity to roll is more or less inherent in all mules, particularly when suffering from galled backs or raws, and is both dangerous and alarming to a lady when they roll over on the off-side, as is generally the case. E. had several narrow escapes, and our baggage was fearfully pounded more than once, when Mora was incautiously left for a moment to herself. The simplest way to avoid this unpleasant contingency is always to halt the mule on rough stony ground where possible, and never on smooth greensward, nor on a dusty road—an especial temptation to them when weary. They give little intimation of their intention, except by stretching out their fore and hind legs wide apart, and then too late for a lady's whip, however vigorously applied, to stop them in their downward career.

A few houses were scattered round the large church of Rimasco, perched above the bright river at a fork of the Val Piccola: the right branch leading to Carcofaro and the Col d'Egua; the left to Rima. We halted, just opposite the church, at a clean-looking dwelling, outside of which hung the bush, betokening entertainment of some kind; and we were fortunate in finding obli[illegible] civil, and kind-

hearted people. They soon set before us sweet rye-bread, "fontine," and "birra gazeuse," and after our meagre breakfast we enjoyed a hearty English luncheon on bread and cheese and beer. We were so pleased with their unpretending hospitality and the quiet simplicity of the little room offered us, that, after consulting with Delapierre, and finding they had a couple of clean pallet-beds, we determined to take up our quarters there for the night, and, depositing the saddlebags, make an excursion up the left valley to the German village of Rima. The padrone held the post of "Gabellotto di Sale e Tabac," whatever that was worth, and supplied refreshment for man and beast to the natives going up and down the valley; "forestieri" or tourists being, as he told us, unknown.

In the little garden I found, unexpectedly, a good store of useful vegetables, such as small turnips, onions, haricots, parsley, chicory, endive, &c. Delapierre and I were soon at work in the kitchen concocting Scotch broth, shredding vegetables and slicing onions, which with a portion of the quarter of mutton were put into the great pot on the fire to stew till our return. The people, who watched us intently, were greatly puzzled at the idea of its boiling for six hours, and asked me many amusing questions as I joined their circle round the fire in the chimney nook to superintend operations.

Having made all our arrangements, we started for Rima at one, crossing the left torrent by a narrow Alpine bridge, carried in a high span over the bright sparkling stream, which leapt from one ledge to another in a succession of little pools overhung with ferns and shrubs. Delighted as we had been with the scenery of the lower part of the Val Sermenta, this branch was still more beautiful, and its great charm was, that—instead of being shut in on each side by long mountain ridges from head to foot, only varied by more prominent peaks, as in the other valleys—here the

rocky bluffs and mountain-heads stood out, like groups of towers, in the most romantic perspective combinations with similar points behind; and clothed, on each narrow ledge and niche of the purple and lichen-stained rocks, with forest trees of beech, ash, sycamore, and pine, cresting every summit and standing boldly against the sky—single ones on the very pinnacles as finely shaped as those lower down.

These mountains are not too lofty to lose their fine effect, and in the vistas formed by them glimpses were revealed, every now and then, of the apparently inaccessible jagged pyramids, streaked with snow, of the Monte Carnera, Taglia Ferro, and others. The translucent stream which we skirted was a succession of cascades and pools of the brightest aquamarine, as at Fervento; with a profuse clothing of rank herbage, tufts of ferns, and copse-wood, to the edge of the torrent-bed—a scene of sunny solitude unsurpassed in romantic beauty. It is not until the valley opens out higher up, that there is room for any village.

Near San Giuseppe—the first straggling group of châlets—the deciduous trees began to disappear, the dark masses of the *Pinus picea* taking their place on the shady side of the valley, though on the slopes facing the south a number of solitary beeches here and there on the mountain-ledges were remarkable for their great size and beauty at such an elevation. The rude track on the well-worn rock was exceedingly slippery, and Mora floundered about in a curious fashion, to the great distress of some of the women of San Giuseppe, who piteously deplored her fate; and the cattle evidently were little accustomed to a mule, or, at all events, to a mounted lady, scampering off precipitately in all directions, to the dismay of the women in care of them.

San Giuseppe has a church of its own, and the population is about 180, but there seemed nothing except the scanty herbage for the support of the inhabitants. Beyond this point the Val was completely closed in by the great barren

ridges of the Turlo mountain, which here wore the same singularly sterile appearance and the same ochrey grey colouring as from the Alagna side; its forbidding-looking mass unfortunately shutting out all view of Monte Rosa.

At length, at the very head of the Val, we came in view of Rima: a lonely cluster of houses of unmistakeable German construction, closely grouped at the further side of a wide tract of grassy knolls, under the singular point of the Cima di Rima. The wild peaks of the Taglia Ferro and Monte Cucco, frowningly overhung the little village; the precipices of bare rock on their northern sides coated with hoar frost, and sprinkled with fresh snow. The whole valley here was in deep shade, though only about two o'clock, while the warm sun was shining cheerily round the grim flank of the Taglia Ferro, on the forests lower down.

As seen from this side they are grand mountains; bare, rugged pyramids, so tremendously steep, that they seemed utterly inaccessible. It was difficult to imagine they could ever have been scaled, though our friend the curé of Alagna had told us of several ascents he had made of the "bella e superba piramide," as he justly calls it, of the Taglia Ferro. This peak he states is 10,000 feet high, while the Turlo is 9000 (9141 according to Forbes), and the Col de Moud 7000. It is only accessible on one flank, and on the extreme point of the pinnacled rock a narrow pathway may be seen, so much resembling the work of mining tools and blasting, that not only does the mountain derive its name from it, but, according to Gnifetti, there is a widely received tradition that this cutting, or "taglio," is the remains of a road carried over its summit by the Saracens, from the Val Sesia to the Valais! Why they took such pains to scale the giddy summit, so far out of any possible route, seems to have been forgotten in the tradition.

Rima is situated in the head of a remarkable group of diverging chains, springing from the Signal Kuppe buttress

of Monte Rosa. The loftiest of these, running eastward, and comprising the Turlo, Cima di Rima, Col d'Egua, Pizzo del Moro, &c., divides into two forks: the foot of one stretching to the junction of the Tosa with the Lago Maggiore; the other abutting on Omegna, at the head of the Lago d'Orta—where, turning southward, the chain runs down to Borgo Sesia; the Val Strona lying between the upper part of these two ridges Another chain branches to the S.E., from the Col d'Egua, nearly to Varallo, shutting in the Val Mastalone. Lastly, that of which the Cima di Moud, Taglia Ferro, and Monte Carnera, are the dominant points, forms a sinuous barrier of vast height between the two divisions of the Val Sesia—the Val Grande, and the Val Piccola or Sermenta—down to their junction at Balmuccia.

Almost the only passes between these two Vals are, from Rima, at the extremity of the Val Piccola, to Alagna, the highest commune in the Val Grande; the principal of which, and the only one practicable for mules, is the Col di Moud, between the Cima di Rima and the Cima di Moud. Another lies higher up between the Cima di Rima and Monte Turlo —called the Col di Rima; and one called the Bocchetta d'Alagna, or Passo della Moanda—where is a very remarkable cave, inhabited by the shepherds in summer—between the Taglia Ferro and Monte Carnera. Beside these I could only hear of another and equally unfrequented track, south of Monte Carnera, descending to Riva. The only communication with the Val Anzasca is by the trying ascent of the Turlo, on the summit of which it joins the pass over to Macugnaga; at a point where is a great square rock, conspicuous from the valley, and some four to five hours' good walk from Rima.

Thus isolated from the world—shut out from the sun for months by overhanging gloomy ridges—with a snow winter which last- f n November to May or June in this dreary

spot—flourishes the little German colony of Rima, with a population of some 180 or 190. Scarce a vestige of a tree breaks the desolation of the scene, and fearful avalanches, from time to time, have all but annihilated it: a position which I confess was a complete paradox to us, until we visited Macugnaga, and traced the probable progress of the first German adventurers, over the Monte Moro, to the primal settlement in that Val; and thence by the Turlo to Riva, Alagna, Gressoney, and Ayas; each situation probably at that time unoccupied.

A community more in contrast with what its first distant view would have led us to expect, could hardly be imagined. The women (and, with the exception of children and the curé, the population seemed nearly made up of them) were very handsome and graceful; with complexions strikingly clear and fair, after the darker Val Sesians; and especially remarkable the finely drawn eyebrows and lashes of their almond-shaped eyes. Their vigorous forms were undistorted by the appliances of artificial society, and their becoming costume was like the Val Sesians'; the short petticoat distinguished by a broad red hem at the bottom. The very few men we saw were equally robust and well-made; and it was a gratification to see so high a physical type, combined with so much energy, under such adverse circumstances; and as at Alagna, they were so far educated, that every soul of fit age, as we were told, could read and write fluently. In language, manners, and marriage, these little German communities have for centuries held themselves entirely and proudly aloof from the other inhabitants of the valleys: and considering the smallness of their respective populations, and that all are intricately connected by the closest cousinship, it is a remarkable fact, of which I could find no satisfactory solution, that they are so signal an exception to the usual pernicious effects of frequent intermarriage, both mental and physical.

The church, large enough for a city parish, and pleasantly situated on a terrace in front of the chief houses, had decorated side chapels; on each side of the choir, large carved doors enclosed reliquaries, and the air was heavy with the perfume of incense. Outside, in an arched recess, grated in front, was a pile of bleached skulls, neatly arranged, and finished up with three, on each of which was a curé's worn-out, four-cornered black cap, as if in grim mockery; but we were told they were the actual crania of three of their former respected pastors—the latest not fifty years old!

The population at home were busily employed in bringing in the new hay, collected from every nook where grass grew; with wood for the winter, and other stores; filling all their spare chambers, and piled up in the tiers of balconies outside their wooden châlets, for winter use. In the principal balcony of the curé's house was a row of beautiful carnations in pots, in full bloom. Every knoll resounded with the tinkling bells of the cattle, which seemed eating all they could get before winter caught them; and the valley was for the time a busy scene of active life. There were several little garden patches, in which I noticed, with surprise, some excellent vegetables; and Delapierre—who, since his initiation into the mysteries of Scotch broth, was always on the look-out for anything available for the pot—secured some fine carrots, to complete the soup we had left simmering at Rimasco.

Outside the village we met with the curé, sitting on a wall with two of the landowners, all smoking their pipes; and our appearance greatly astonished them. He was a very robust-looking contrast to the dry bones of his predecessors, which we had just seen: but though he seemed far too portly for the mountains, he was evidently intimately acquainted with every pass, and kindly gave me much useful information. The path, on returning, was even more slippery than in coming up, and required some care. It was late when we got back to our little room at Rimasco; and we did ample

justice to the broiled trout, and the savoury results of our joint concoction—and our host and his family, who finished the remainder, now pronounced the "zuppa Scozzese" most excellent.

At dawn next morning there was a heavy "brouillard," which seemed settling down determinedly; and, though anxious to get to Ponte Grande before Sunday, yet—as Delapierre had only once crossed the Col d'Egua, many years before, on a smuggling expedition—we hardly thought it safe to venture in such weather, there being no guide to be had; nor could we hear of any mule ever having crossed it. I therefore took my rod down to the beautiful little stream for two or three hours before breakfast—after which it cleared a little, and we then prepared to start. Our host, Antonietti, made so modest a charge for our entertainment—seeming almost recompensed by the pleasure of seeing us—that we added a "buonamano," in the way of encouragement to follow the advice we gave him, to do the same to future travellers, as likely to be the most profitable in the end.

The church-bell was tolling for a funeral, and, on going into the building, the trestles were set ready for the coffin, covered by a curious pall of black cloth, painted all over with buff skeletons. A woman was tolling the bell, and another, acting as sexton, preparing the grave. The church was surprisingly large and decorated, for a small mountain parish of only 250 souls; and there were some fair frescoes of the Lord's Supper, and the Presentation in the Temple.

Before 9 Mora was saddled and the baggage packed, a glimpse of sun encouraging our start, and we walked on in advance. At a little wayside oratory we came upon the funeral procession, just assembled there; which, with the exception of the priest and his assistants, was entirely composed of women, all the men being on the mountains. They all wore a long, white, scarf-like veil, mantling the head, hanging low in front, which contrasted picturesquely with the

dark blue costume; but there was apparently no sympathy among them, as they were all talking and laughing in a most unseemly manner. The corpse was that of a young man of twenty-seven, who, in following his business, as a maker of cask-staves, in the mountain forests, had fallen down a precipice, and was killed. As we halted respectfully on one side to let the procession pass, we saw them smooth down the corpse in the middle of the road, fix the lid on the rudely-made coffin, and nail it down, with little reverence; when four of the women raised it on their shoulders, and bore it down to the church of Rimasco, the priest and his superannuated attendant chanting the "Miserere."

From Rimasco to Carcofaro took us an hour and a half. The scenery of this branch of the Val Sermenta, though wild, is not to compare with that of the other leading to Rima. The heights on our left—the spurs of the Cima Lampone and Cima del Dall—were thinly sprinkled with scanty herbage, though on the right the mountains were in places richly wooded, the pine greatly preponderating. We passed one or two little hamlets and saw-mills, but as to their names and relative situations the respective maps of Wörl and the Government Survey are in a state of hopeless discrepancy, the only name found in both, Ferrate, being placed some miles apart between the two; and the replies to my attempt to clear up the topography agreed with neither. Nothing can be more unsatisfactory than the looseness and vagueness of most of the maps in these upper valleys, where the correct laying down and naming of a village or peak is often of so great consequence to the pedestrian.

The fine beech-trees, which had more or less thickly studded the mountain-sides on our way up—their yellow foliage mixed with dark pine—ceased entirely and most abruptly at Carcofaro, their limit marked by a line running up the hill-side from the village. Beyond this not a tree

was to be seen, except a remarkable ash on an eminence above Carcofaro. The head of the valley opened out into a deep bay, appearing to be entirely shut in by an irregular wall of mountains, bare as they were stern and gloomy-looking; the dense cloud of mist low down their sides casting an almost twilight shade on the valley. A desolate bed of shingle occupied a wide space of the plain, seamed with the now contracted torrent; giving unmistakeable evidence of the fury of winter storms, and spring floods from the melting snow. Across this we entered the village by a rude bridge, through an arched gateway almost pretentious; the clean, flourishing appearance of the narrow, irregular street, surprising us.

I inquired my way to the curé's, who came out to receive us as he heard the clatter of Mora's feet on the stones; and he quickly made us welcome to his house, warmly pressing his hospitality. I had been struck with his garden as we entered Carcofaro, and he was justly proud to show it. Though of very small extent, it was beautifully kept, and evidenced a remarkable perseverance against the most unfavourable combination of climate and situation; where even the hardy larch had ceased to grow, such was the apparent sterility of the position. A bed of turnips was by far the best crop I had seen in Piedmont (where, however, this valuable esculent is unintelligibly rare); and, in fact, he said he had sent one last year to Turin more than a mètre (about 3 ft. 3 in.) in circumference. The kind he grew had a purple skin, and he called them "rave," distinguishing them from the "navone," or ordinary turnip. I got seed from him, intending to try them at home.

He also grew excellent green peas, carrots, lettuce, celery, chichory, endive, and a variety of herbs; and such fine leeks, that I inquired how he managed to grow them so much larger than any we had seen in the rich Val d'Aosta, with all its advantages of sun and soil. He told me he was at

the pains to get the young plants all the way from Turin in the spring; and a bed of those sown by himself showed the difference. There was a display of flowers, startling in this wild mountain scene, 3500 feet above the sea, where the sky was diminished to two-thirds the hemisphere, and the snow lies in winter often six feet deep. The asters would have done credit to any German garden; and a noble group of bright Martagon lilies, above five feet high, were in magnificent bloom. He gave me a handful of the little axillary bulbs to plant as a souvenir of Carcofaro, which I preserved with the seed of the "rave;" and also of the large curly-podded pea, the pods of which are eaten whole like haricots, fried in butter after boiling an hour, and are excellent. A blaze of beautiful carnations and picotees—of varied colours, in very large pots, and apparently, from their size and woody stems, of great age—were ranged along the carved wooden balcony, over which their luxuriant stems hung in festoons of many-hued blooms, from purple to scarlet and white. The whole place was kept in the neatest order, and attended to by himself; every part of it showing skill and contrivance, with an attention to domestic comfort more English than we had met with anywhere else.

Among his improvements he showed a jet of sparkling water, brought to his door by an underground pipe, from a perpetual spring in the mountains; of which he said only those could duly estimate the value who were shut up here in winter, when all other water was frozen hard, and the difficulty of getting it so great. He took us to the Syndic's house, where marks drawn on the wall recorded the depth of the winter snow, which, for the last year, measuring by my graduated alpenstock, was all-but nine feet! He was anxious that we should see the church, which had suffered very severely from the earthquake of July 25th. The fabric had just been repaired, and richly decorated with paintings and brilliant gilding; everything was thoroughly well kept and

handsome, more so even than at Rima and Rimasco. It is remarkable, as it is creditable, that the hardy mountaineers of these valleys, with so scanty means, though content with their own rude huts and humble châlets, seem to grudge no expense in building or adding to the beauty of their churches.

Carcofaro is even less than Rimasco, having only 190 inhabitants; the hamlets, just below it, numbering altogether some 220, with their own church. I found that the wages of the men were 30 Milanese soldi, and of the women 15, with their food, which is meagre enough—little else than thin "minestra," or polenta, with black bread. Skilled labour could command 3 lire, or about 2*s.* a-day. We returned with the curé to his house, where, on our declining refreshment, he brought out a highly flavoured and pleasant liqueur, distilled from the flowers of the "Genepi," found by him in the mountains, and which he had tried to cultivate in his garden, but with little success.

His room and sanctum beyond it—on the table of which lay a sermon in progress—with the books and other articles about, were in accordance with his superior tone and pleasing manner. "P. Maurisco Cevute, Parroco di Carocofaro" (as he wrote his name on a blank leaf to remind us of him), told us he was shortly going to take the cure of Borgo Sesia, as he felt he was getting too old to sustain the rigour of the winters here. We sincerely hoped it might be for his advantage, as his present stipend was but 500 francs, or 20*l.* a-year. The incomes of the curés, until recently, varied as much in Piedmont as in England; and many in these mountain valleys were, even in proportion, far worse than the most miserable stipends of any of the parishes of the Highlands, Cumberland, or Wales. Some are passing rich for the country, having important glebe territories, and pasturing very large flocks—the local standard of wealth—while others, as at Rimasco, Carcofaro, &c., have but a

miserable pittance; and we heard of numerous instances, of which open complaints were freely made to us, as intolerable grievances, where the poverty of the priests led to exactions from their flocks on all kinds of religious pretences.

The measure, therefore, which had only a few months before passed the Chambers, under the name of the "Convent Law," was everywhere, we found, hailed with satisfaction by all classes (excepting the clergy), as a most beneficial adjustment of the extremes of wealth and poverty. By it the Church, whose revenue exceeded considerably a tenth of that of landed property, was to maintain itself, and supply the deficiencies of the poorer cures; an arrangement especially beneficial to these valleys, the resources of which are so small, and where the population is so little liable to any fluctuations, that the adjustment once made is likely to be permanent. Out of 4431 parishes there were stated to be 2540 cures, the income of which was below 500 francs, while the annual revenue of the Church was 17,000,000, or four times that of Belgium; and yet to subsidize these poorer livings the government had had to pay 928,412 francs per annum.

This Act took from the dignitaries and richest benefices one-third. Certain convents and chapters were suppressed after pensioning the members; and all the proceeds were applied to the augmentation of the poorer cures, and other ecclesiastical and educational purposes. Of course such a measure met with violent opposition from the Vatican, which it required all the moral courage of the government to encounter; combined as it was with the denunciations of the clergy at home, who pointed to the cholera, the vine disease, and the singular coincidence of the sad loss of the King's mother, wife, and brother, as the judgments of God on his sacrilegious interference. It was evident from what we daily saw and heard, that this course of conduct had very greatly tended to increase the growing dislike of the people to the

priesthood, and the influence of Rome; and even the domestic afflictions of the King were unhesitatingly attributed to foul play.

The Col d' Egua, and its difficulties and risks, enhanced by very doubtful weather, still lay before us, and it was already half-past eleven when we set out again; the worthy Padre Cevute accompanying us to the outskirts of his little parish. He seemed to think it far from unlikely that he should soon see us back again, as every one we spoke to, including himself, expressed their grave doubts at our accomplishing the pass with the mule; and could hardly believe a lady would attempt it, especially in such weather. We had learnt, however, that cattle frequently crossed it, and Delapierre silenced, if he did not satisfy them, with his favourite axiom, "Où les vaches passent, Mora passe aussi;" and we began the ascent at once, turning up a narrow valley to the right, by steep grassy pastures, and afterwards through a very thinly sprinkled forest of stunted larch.

Some foresters in the higher part of it, and concealed from view by the thick lowering clouds, were at work, with strong poles as levers, rolling lengths of cut timber down the rapid incline; which came tumbling down from above with a force and an uncertainty of direction, depending on the rocks and hollows in the descent, which made it dangerous work passing below. After a narrow escape from one, which bounded past me at a couple of yards' distance, I thought it high time to interfere, and hailed them with my whistle; when a woodman, descending into sight, stopped his comrades just in time to secure safety for E. and the mule, who were following.

An appearance of the day's clearing up had encouraged us to start; but at noon the heavy clouds settled down hopelessly; first at the head of the valley, and then closed gradually down the glen like a curtain, enveloping us in mist, which soon turned to drizzling rain. But having got a brief

sight of the direction of the pass, which was pointed out to me on the mountain face, by a shepherd with whom I had stopped to have a chat, I pushed on by a short cut up the steep turfy incline, until I reached a stone cabin with a few hovels round it, perched, as it seemed through the clouds, on the top of a promontory of rocks. Here I waited half an hour until E. came up; and crept for shelter into the rude cabin, after forcing the door, where I found plenty of coarse hay, and evidences of shepherd life, but all was now deserted for the year.

E. at last arrived, and with her the woman whom Delapierre had hired at Rimasco to carry part of the baggage to the top of the pass. Mora, whose novel appearance had scared all the cows on the pastures below, as she had the day before at Rima, was in an incorrigibly lazy humour, and all day constantly insisted on stopping to take a mouthful of grass, or a thistle-top, or even scrubby sticks in default of anything more succulent. She was most provokingly indifferent—little time as we had to spare—to the vigorous assaults of Delapierre's alpenstock; but she behaved so admirably in the subsequent difficulties of the pass, that she more than retrieved her character.

The mist and drizzle were now so dense, that we all kept together; as, when but a few yards in advance, I could only hear the voices of those following, until their hazy figures came dimly into sight, like giants. Turning a little to the right from the huts, we continued by a narrow sheep track; constantly skirting the edge of a deep ravine, all but hidden by the clouds, which boiled up at our feet in eddies. The ascent was extremely stiff, and dangerous for Mora in many places; indeed, very few mules could have carried a lady over it, and their passage of this Col, we afterwards learnt, was so rare as to be considered a great feat, even with only a pack. Delapierre was obliged to keep constantly at her head in some of the steepest places, where there was barely

footing channelled in the splintery gneiss. In these perilous scrambles, which required no small nerve and coolness, I could only stand silently by, ready to help in case of an accident, which I momentarily expected. Both mule and rider, however, bravely got over all difficulties, without E.'s once dismounting; until, in 2¼ hours after leaving Carcofaro, we reached a pile of stones, in the "Bocchetta," or narrow nick, which is the crest of the pass.

I had looked forward to the magnificent view of Monte Rosa, which there was said to be from this summit, displaying the whole of the chief peaks at once: and had hoped to add a sketch of it to my series of views from the different Vals. But clammy, drenching clouds swept densely over the Col, and we could only just distinguish each other as we stood round the cairn. The provend had unfortunately been neglected at Rimasco; and we had nothing with us, hungry as we were, but raw mutton and wedges of hard black bread, on the latter of which we dined; and as we stood munching it, and shivering in the raw, damp mist, we would have given much for a little wine or spirits, of which we had not a drop. There was no temptation to linger, even had we had time to spare; and, finishing the bread as quickly as possible with a little snow to quench our thirst, the wraps and extra baggage, which the woman from Rimasco had brought up in the deep conical basket on her back, were now transferred to the mule; E. descending on foot. Our fair portress returned to Carcofaro alone, and our sympathies were, I suppose, misplaced, as we saw her, without any covering to her head or thin white chemisette, disappear in the fog; so habituated are these fine, vigorous women to the hardest mountain work in all weathers.

It was too late now to lose time in testing the boiling point; and Saussure gives the height of the Col d'Egua by barometer as 1104 toises, or 7059 feet: not a great altitude in itself, but comparatively so, from the levels of the Vals

Sermenta and Sesia being so much lower than those we had been so long traversing.

As quickly as possible we commenced the descent, down a steep incline of loose shingly gneiss; but we had gone but a short distance when the slight track entirely failed us, near a rock at the foot of the highest point on our left. The thick clouds of drizzling mist and snow-flakes increased in density, completely preventing our seeing further than a few yards before us, except at brief intervals; and Delapierre was quite at fault, his former passage of the Col, many years before, having been made with a smuggling party, in the spring, when the weather was clear, and the snow deep and firm. We were in a position of difficulty, and no small danger, as the day was so far gone, and we had no provisions or wine with us, should we be kept out on the mountains all night; nor sufficient wraps, even for E., to sleep in on the bare rock. It was imperative to make every effort to regain the track, and, leaving her with the mule, we made one détour after another; each time taking a wider circle, and signalling to one another with our whistles; but all in vain. We found nothing but wild morass, or stony wastes, ending in impracticable precipices—or what seemed so in the indistinctness.

At length, Delapierre, after another trial, hailed me, saying he had found a track in the ravine below, to which we quickly descended, and followed it along the shingly débris; but the narrow mark soon became fainter and fainter; leading us over strangely wild ground, up hill and down dell; until I felt convinced we were entirely wrong, and proved to him clearly, by my pocket-compass, that we were steering to the south of east, and so quite out of our reckoning. We had no alternative but to turn back again. Time was most precious, as we had already lost two hours in wandering about. I therefore determined to return to the rock from which we first started, and endeavour to get back over the Col, by the better marked track, to the hovels we had left at

noon, if, within a given time, we could not find the descent, by taking the widest circles we could, within sound of my whistle.

We scrambled up again as hastily as possible, seriously calculating the prospects of a dreary night on these lonely heights; drenched to the skin, with nothing to fortify us against the night air and rain; and but a scanty supply of black bread: when I fancied I heard a faint clattering of shingle far above us. Stopping the mule to listen, Delapierre and I gave a joint whoop, which, to our joy, was answered by a wild Alpine cadence, evidently from a shepherd. We made our way in that direction, and, at the top of our voices, begged him to come down to us. He refused for a long time, but at last consented, stimulated by the promise of a liberal reward, and Delapierre's reproach that he himself would go through fire and water to help lost travellers in his own country, and especially a "signora."

It was even now difficult for us to find one another in the mist, which we only did after a great deal of shouting and whistling; when he led us back to the very rock we had left, and then across the morass, over a little stream, at the same point I had crossed it. Near this, within a few yards of one of my circles, was the long lost track, at the very edge of an apparent precipice; the reason of our having tried no further in that direction. It now seemed strange we had missed it; yet every one who has been lost in such heavy cloud and mist knows how bewildering is the effect; and how strangely every feature of such a scene is distorted and magnified, even when well known.

The fortunate passing of the shepherd over this little-frequented Col, at the moment when we were in the greatest peril, was most providential. We found he had been over as far as the châlets of Baranca, in the Val Ollocia, early in the morning, as guide to a priest, who had been on a visit to his relatives at Carcofaro; and was on his return, and but a very

short distance from the crest of the pass, when I fortunately heard his footsteps on the loose stones. Without his timely aid we never could have found the track, and must have spent the night at least on the Col. He told us he had been each summer of his life on these mountains, and knew every rock and ravine in the thickest "nebbie." He accompanied us for a little distance down the rugged descent, when, saying he feared being himself belated, he turned back to pass the Col, giving us directions to take the path to the left, near a little oratory or chapel half an hour below. I found that his reluctance to descend to our help was owing to his master's orders to return at once, as much as to his fears of being benighted himself; and we willingly rewarded him for his opportune extrication of us from our difficulties.

The traces of the path after he left us were often so uncertain that every now and then we were brought to a halt, as we could discern nothing twenty yards before us; especially in places where the cattle and sheep had been assembled every night, and a number of tracks diverged in every direction; but with the aid of the compass, and occasionally trying a cast round, we managed to keep right. As far as we could judge, the path lay over dreary swamps or among detached blocks of stone, strewn in wild confusion, and for great part in a very narrow gully between high rocks of gneiss, which in places seemed like a watercourse. The principal difficulty was in the tremendous descents for poor Mora, down these apparently impracticable channels between the steeply-inclined strata, laden as she was. We stood watching her in breathless anxiety at the worst places, while she slid, scrambled, or dropped from ledge to ledge, Delapierre supporting her by vigorously pulling her back by the tail, a process which she seemed to be grateful for rather than resent. Though often sliding several yards at a time down narrow niches in the rock, she never lost her footing. At each successful glissade we applauded her heartily, and

could not help laughing when we looked back on the strange descents which she achieved without accident; though for many days after she suffered seriously, being swelled to nearly double her size with the severe exertion.

At length, through a momentary opening, we descried the stone hovels of Baranca, and a wooden cross on a smooth green "alp" below us, and, descending to them, found them deserted and most dreary-looking, surrounded by extraordinarily great heaps of semi-fluid manure. There was no end to the paths here, and I was glad to discover the little "white chapel" which the shepherd had named; and making for it found two paths traced on the smooth green pasture. One, turning back to the south-east, was evidently the route to Fobello in the Val Mastalone, in which direction we ought to have had a view of Lago Maggiore and the plains of Italy; the other, on the left, led down the Val Ollocia, but it soon spread out into tracks in every direction, and with the heavy fog we were again at fault. Delapierre and I differed so entirely as to the true one that we each took our own line; but by keeping up too high to the right he and Mora were soon in trouble, and he had to retrace his steps as well as he could and come down to us. I had trusted to the compass, which proved right, and completely established the reputation of the "bussole," which was of invaluable service to us that day. Delapierre, to whom it seemed quite a novelty, often afterwards alluded to it, and begged me to show and explain it to the wondering natives, as the mysterious instrument which had saved our lives on the Col d'Egua.

When there was a momentary break in the mist we could see we were in a wide deep valley, and further down came on another nest of stone huts, lonely and deserted as the last, which we supposed were the châlets of Lesselette. Here again enormous masses of manure, covered with the rankest weeds, teemed from the front and rear of the row of hovels,

wasting their rich treasures down a mountain-gully: a very Ichaboe to a Mechi, or any enthusiastic agriculturist regardless of a balance-sheet; for the position precluding its being distributed by water-channels, as is usually done, the labour and cost of transporting it to the hill pastures, beyond a few hundred yards, render it a useless nuisance instead of a valuable commodity.

Once more we were at fault among the many diverging tracks; and E. and I, taking one to the left, came to the first brushwood we had seen. Fortunately hearing some woodcutters at work, I hailed, and made for them, when we found we were in the right direction, and Delapierre had again to come down and cross the valley to us. The brushwood which they were cutting for fuel was chiefly the "dros," or "bergdross," as they call the Alpine alder (*Alnus viridis*), which ascends the mountain sides to elevations of 7000 feet —and the "ratta" or *Rhododendron ferugineum*, which reaches to 8000 feet, and was here of very great size, forming noble bushes many feet in diameter. The sharp stumps, where it was cleared, were very treacherous in the descent we had to make to regain the path. From here, which is at an elevation of between 5000 and 6000 feet, the stunted copsewood gradually grew into trees, showing the diminution of altitude; until we first skirted and then entered a forest of splendid beeches, sycamore, pine, mountain-ash, and a thick undergrowth of laburnum.

From this we opened on a wide, densely-wooded valley, of remarkable character; and, as we were now below the level of cloud and mist, could follow it with the eye to the far distance where it debouched on the Val Anzasca. Through the bottom of it roared a foaming torrent, in parts of which deep unmelted beds of last winter's snow were still lying. To this we scrambled down by a slushy, slippery descent, as we had to cross the torrent to the left side. Fording the roaring stream among the huge boulders

was impossible, and the only alternative was a very precarious sort of foot-bridge, formed of two or three long, slender trees, undefended on either side, and at some height above the torrent. Delapierre, who never stuck at anything, went on first, making Mora follow him along the crazy poles, which bent perilously under her weight, loaded as she was. He afterwards confessed how desperate he thought her chance of ever getting safely over. We followed, and continued along a path above the left bank, under a forest descending from the richly-wooded heights which rose far above us on our left.

On our right, the dark mountain-side opposite, for nearly an hour as we descended, presented an extraordinary spectacle, being one dreary, melancholy-looking waste—from the brink of the torrent till lost in the clouds—of dead and blasted pine-trees and larches, either standing lifeless and branchless, or strewn uprooted by thousands on the ground. The prostrate trees lay so nearly in one direction that it appeared as if it were the result of a hurricane, though such an utter devastation by such means seemed almost inconceivable; but we learnt from a grim "carbonaio" at a group of charcoal fires below, that it had been caused by a tremendous storm which had swept down the valley the January previous, carrying everything before it. The dreary aspect presented by this utter wreck of a forest, extending for many square miles, was most extraordinary, and such as I never witnessed before or since; the shattered trunks still left standing increasing the dismal desolation.

The amount of wood in these splendid mountain forests is enormous on every side of the Val Ollocia, as the valley is called from the Col d'Egua down to Banio. As far as the eye could reach, one lofty range after another, and each intersecting valley, were clothed, from the base to their rounded summits, with mighty primeval forests, without a break to the distant mountain horizon. First, pines intermixed with noble

beech and other deciduous trees; then dark belts of the "pece" (*Pinus picea*); and, highest of all, endless waves of larch. In no part of Piedmont had we seen anything comparable to it. At the height at which we were, as we looked far away to the purpled ranges of the Val Anzasca, all was one magnificent interminable forest. At great heights in it columns of blue smoke, ascending from the charcoal-burners' fires, mingled with the wreathing clouds; and, as night stole on us, their glowing lights shone out like distant aërial furnaces, in the deepening gloom.

Mighty as are these forests, the axe was at work on a scale proportionate to the wonderful field ready for it. A mile or two below the head of this reach of the valley, and on the side opposite the mule track, commenced a timber-shoot, carried along and above the bed of the torrent like a long viaduct; consisting of a lofty stage formed entirely of large barked timber trees. They were laid side by side so as to form a road, hollowed in the middle, and supported by a leaning scaffolding, also of the largest trees entire, and extending for miles down the Val Ollocia, until it reached the river Anza in the main valley.

We heard the woodmen busy at work, shouting and singing in lusty chorus—just like jolly tars at the capstan—as they were lowering or adjusting the fallen timber. Enormous tiers of it were lying piled up alongside the shoot, ready to be sent down into the valley below, which is done in the winter. During frost the smooth trunks forming the trough-like road are watered by the mountain streams, or coated with snow, and on this slippery bed of ice the timber is launched, shooting with rapidly increasing velocity along the incline to the bottom; there it leaps into the Anza, whose waters, when swelled by floods in winter and spring, drift it down to the Lago Maggiore, on its way to Milan. One of the proprietors, who resided at Ponte Grande, told me that half a million of trees are thus brought down in a winter. The

quantity of timber employed in the shoot alone is immense; and yet with all this the clearing as yet is hardly observable, and absolutely a mere nothing to the vast tracts of pathless forest, extending for leagues, which still remain and must do for ages.

Our track on the left side began to seem as interminable as the forest itself, as we trudged on until twilight overtook us. At one point the ledge on the face of the cliff suddenly became too narrow, first for the mule and then for myself in advance; ending abruptly at a ravine, where it was evident the track had been recently destroyed. To get back was no easy matter, as well as a serious loss of time. Mora, however, was supposed equal to anything; and rather than retrace our steps, as night was fast closing in, Delapierre brought her at once in a marvellous manner down the steep face, where E. found it very difficult to follow. It was impossible to resist laughing, as Mora slipped and scrambled like a monkey, tearing through bush and brake, until she dropped on a better track below.

There was just light enough to see that we were now among fine Spanish chesnuts and walnuts, and we passed a few scattered châlets; the first inhabited places since we left Carcofaro in the morning. At a sudden turn a joyous chime of bells, borne up from the valley below and sounding like a welcome, told us we were again nearing the habitable world, and our night's destination. Still we had a long descent in the dark, down a slippery path of large well-worn blocks of stone, requiring caution, as its inequalities were undiscernible under the deep gloom of the great trees, as it wound for an hour or two through a continuous grove of Spanish chesnuts, the boles and gnarled roots of which were of enormous size. We stumbled along, feeling our way with our alpenstocks, until at length we suddenly came on a dazzling light, gleaming through the trees, which was the campanile of Banio, brightly illuminated with rows of lamps, the white spire looking like phosphorus in the waving light.

In endeavouring to find our way into the village, we got absurdly involved in some perilous back premises, the owners of which came out with lights, and their astonishment was unfeigned at our startling apparition in their little gardens or back yards. They, however, laughed when they understood our case, letting us out through a passage, from which we groped our way along the dark narrow streets, and emerging into a wide piazza or square, with the church in the centre, found it illuminated and densely crowded with people, while the bells we had heard above were ringing furiously. Lanterns and cressets, and pans of blazing charcoal, were raised on poles stuck in the ground among evergreen arches and festoons of flowers, and ranged along the roofs of the houses and church. Every window was illuminated, the crowd carried torches, fireworks blazed and exploded in all directions, rockets whizzed into the air, and, bewildering as it was to us after so long straining our eyes through the dense fog on the Col and the deepening gloom of the descent, no wonder Mora lost all command over her feelings and launched out with her heels, quickly clearing a wide space for us. We found it was all in honour of the Bishop of Novara, their diocesan, who had that day arrived; and on the morrow, Sunday, high festival was to be holden.

We were not in holiday plight, and, after watching the flight of some good rockets, left the gay scene for the pitch dark road down to Ponte Grande, still half an hour below. A broad clear road, well macadamized, had just been constructed in the most solid manner, descending the hill by easy zigzags; but for what object such expense had been incurred to reach a little place like Baino, the projectors doubtless knew better than we could divine. The roaring of the Anza and numerous scattered lights soon discovered to us the whereabouts of Ponte Grande, which we entered by the extraordinarily high pitched narrow old bridge which gives it the name, and found our way to the inn.

In the "sala" a motley set of Piedmontese, priests, and swaggering carabiniers, were drinking, smoking, and playing cards; while in the adjoining room, through which was the entrance to the sala, peasants were doing much the same, and playing "Morra" with frantic noise and gesticulations. Our appearance excited evident surprise, and all were astonished when it was understood we had crossed the Col d'Egua, and in such weather, with a mule, as they told us it was many years since one had passed it. As soon as we had changed our drenched garments, a welcome supper of noble trout from the Tosa, and stewed chamois, was set before our famished appetites, as we had tasted nothing since our meagre lunch on bread and snow on the top of the Col; and some red wine, which Delapierre had promptly heated with spices, restored warmth to our bodies. The host, who had taken no notice of our arrival, though he was in the room playing cards, at last lounged up at the end of a game, with his coat off and a huge meerschaum in his mouth, and he did not improve on acquaintance.

We soon left the noisy party and retired to rest, duly thankful—unpleasing as our quarters were—to be safely housed for the night, instead of huddling under some rock on the top of the dreary Col we had left far above us, in drizzling sleet and snow, without food or wine; and with little better chance of finding our way the next day, which proved one of incessant rain and thick mist.

CHAPTER XVIII.

VAL ANZASCA.—VAL MACUGNAGA.

Ponte Grande — Festa and procession — Bishop of Novara — Inn — Mora's plight — Start for Macugnaga — Vanzone — Cure's apiary — Ceppo Morelli — Ferus — Limit of Val Anzasca — Barrier of ancient moraine — Morgen — Pestarena — Borca — "Albergo dei Cacciatori" — Culinary matters — Marmot — Monte Rosa — Inundations — Macugnaga glacier — Belvedere — Lost valley — Ascent of Monte Moro — Old church and linden-tree — German colonies — origin of Dialects — Gold-mines of Pestarena — Descent to Calasca — Deluge of rain — Lower Val Anzasca — Pio di Mulera — View into Val d'Ossola.

THE morning of the great Sunday festa at Banio dawned gloomily enough. The dense cloud of brouillard, which had enveloped us on our weary walk over the Col d'Egua, the day before, now hung down closely on the valley, like a dark curtain. By nine o'clock a thorough drenching rain poured steadily down, without intermission for the rest of the day; until the noisy Anza in front of our windows, brimful to the banks, roared like thunder down its rough granite bed.

We were awoke by the ringing of the church bells; followed by the melodious sounds of chanting, coming up the valley, which swelled into rich harmony as it passed under our windows. Looking out, we saw a long procession filing past; headed by banners, crucifixes, and highly gilt and decorated carved lanterns on poles; followed by a long line of picturesquely dressed peasants, in full Val Anzascan costume. The rear was closed up by a number of priests, in richly embroidered vestments of purple, fine linen, and gold brocade; carrying the gold enshrined pyx and massive silver crucifixes; accompanied by a body of chorister boys in white surplices, whose treble and contralto voices alternated with the deep tenors and bass of the priests. As they neared the

church on the bridge, the bells rang out hurriedly and loud from the campanile; and uncovering their heads on approaching it, the procession made a short halt at the door; and then wound up the zigzag road opposite our windows, by which we had descended the night before.

Scarcely had it extended in full line, when we again heard the sounds of chanting, from the opposite direction, coming down the valley; and another procession crossed the bridge, still longer than the last; and—except the priests, choristers, and banner-bearers—entirely of women in a different costume; their heads covered with a wide veil of white linen, which hung down below their waists. Another and another procession, from different parts of the Val, followed in succession; until eight were seen all at once, winding up the face of the hill, in long and varied line: one of the most picturesque scenic effects I ever witnessed. Three of the processions were from up the Val—viz. from St. Carlo, Ceppo Morelli, and Vanzone; and three from below—Calasca, Castiglione, and Cima Mulera; in addition to which, were those from Ponte Grande and the neighbourhood.

Each long line was distinct in its costume; and several of the processions comprised numbers of little girls, in white frocks, white net or cambric veils, with wreaths of roses round their heads, and carrying garlands in their hands. This was perhaps the prettiest part of the whole pageant. We were again excessively struck with the universal and remarkable beauty of the women; and the exquisite cleanliness and freshness of their characteristic dress, with the same fine and vigorous forms as noticed elsewhere. The effect of the different processions, the varied costumes, the white veils, and the clusters of surpliced priests, was especially striking, as they ascended slowly in sinuous line under the wide-spreading chesnut trees. Before the last had quitted Ponte Grande the impending rain fell in torrents; and, suddenly, at the first burst, hundreds of crimson, green, orange, yellow,

and striped umbrellas, shot up along the lines, their gaudy colours heightening the effect.

The plaintive tones of the chanting rose and fell musically in the distance; and there was something more satisfactory in the idea of such a procession going to do homage to their bishop, to receive his blessing, and have their children confirmed, than had they been on a pilgrimage to the miracle-mongering shrine of some pseudo saint.

The bishopric of Novara was said to be the richest, as well as the most extensive, in Piedmont; consisting of 390 parishes, with an income of above 100,000 francs. The bishop was extremely infirm, getting through his public duties with great difficulty; and, in consequence, his visits to these outlying Vals were very rare. On the present occasion he had come for the confirmations, the consecration and re-opening of churches, and the visitation of his clergy.

We regretted the pouring rain as much for the unfortunate processionists as for ourselves. The sala, as on the previous night, was filled with an indiscriminate crowd, smoking and drinking, joined later on by a number of priests; and as no other room was to be had, we preferred to spend the Sunday quietly in our bed-room, mean as it was: for not a single break in the rain allowed us to escape into the quiet country, and strict economy of dry clothes prevented our roughing it at all hazards.

The inn at Ponte Grande was the most disagreeable, and its landlord the least obliging, we ever met with anywhere. Though in general we troubled ourselves but little about hotel grievances, leaving them to fastidious grumblers, who forget the true object of travelling in the means of accomplishing it; yet, Ponte Grande was a combination of filth with pretension and discomfort of every kind, compared with which any of our former mountain quarters, a smoky châlet or a litter of hay, would have been enjoyment. The sala was at one end of the common room—only separated by

open folding doors—where the peasants messed, smoked vile tobacco, and played cards and noisy games of "Morra" all Sunday; and the only access to the room was by the kitchen. The rudeness and incivility of the waiters was a novelty. In the "Livres des Voyageurs" at various places "en route," we met with constant complaints in the strongest language; and the new hotel, which the landlord was then building, bade fair to stand empty, unless a reform should take place. There is an excellent little inn at Calasca, a mile or two lower down the valley, which would enable travellers to avoid it.

The village of Ponte Grande itself is extremely pretty and clean looking; the houses being unusually well built. The situation is remarkably beautiful, backed as it is by densely wooded heights, from which terraces of trellised vines and luxuriant gardens descend to the rear of the houses. The rapid torrent of the Anza secures effectual drainage. The remarkably narrow and high spanned bridge—which strides over it, based on the bare granite rocks, and gives the village its name—affords a noble point of view, especially when in clear weather the summits of Monte Rosa disclose themselves at the upper end of the deep basin.

Our only walk during the day was to the stable to see poor Mora, who had suffered severely from her extraordinary exertions the day before. Her body was swollen to an almost incredible extent, and her back seriously galled. All that was possible was done for her; and Delapierre had covered her back with a fomenting application of herbs steeped in hot water; chiefly the common pink cranesbill, which he stated to be an excellent remedy, and generally used in such cases. She recovered rapidly, and was quite fit next morning to do the few hours' work up to the head of the valley, E. walking to spare her.

Doubtful as the morning seemed, we were heartily glad to quit our host's at 6 o'clock on the 1st of October without

waiting for breakfast. The lazy waiter modestly demanded 5 francs for his valuable services; having, as I subsequently found, pocketed my corkscrew, combined with various implements, an invaluable companion, and which I had credulously lent him; and also, what was no less valuable in a pedestrian's reduced wardrobe, a pair of Shetland socks was abstracted. Delapierre even, like ourselves, was charged exorbitantly for himself and mule—rather too bad to an old acquaintance and an innkeeper.

The rolling clouds which steamed up after the late rain prevented us seeing the higher mountains; but the Val Anzasca delighted us with its splendid woodland scenery. Vanzone, the little capital of the valley, we thought the cleanliest Italian village we had ever seen. Notwithstanding the narrowness of its street, barely wide enough for two laden mules to pass, it was a model of neatness; and the even strip of granite down the centre was a wonderful improvement on the usual mountainous attempts at paving.

There was, however, no decent inn; and while Delapierre was trying in vain to get something for breakfast for ourselves and Mora, we met with the curé, and, entering into conversation with him, he took us into the church. It was undergoing a complete renovation, and adornment with frescoes. The artist, an intelligent person from Novara, told us his work had been commenced on the 11th of August, and was to be finished by the next Sunday; when a grand "festa" was to be held at its opening. The ceiling was being covered with spirited frescoes of the evangelists, prophets, angels, and priests; with rich gilding, and coloured mouldings; and promised, when the scaffold was removed, to have a most gorgeous effect. Our surprise was, that they could meet the necessarily large expense in so small a community. An image of the Madonna was already taken down from its side altar, in anticipation of the "festa," and clothed in satin, richly embroidered with gold and silver; and while

we were there, numbers of poor peasants came in, to kneel before it, and repeat an Ave Maria. The women wore the picturesque white veil, which in this district they always use on entering church. Over the principal altar was a beautiful little statuette of St. Catherine, in Carrara marble, with a gilt corona.

The curé, Padre Albesini, walked up the valley with us as far as his house, which was at some distance from the village; and at his cordial invitation we went in, to taste some of the honey for which he was famous, and see his hives. I was delighted to find he was an enthusiast in apiarian matters; and had collected a complete library of books on the subject, from Aristotle down to German translations of Nott and Wildman. We discussed the merits of the old Roman, the Greek, Sicilian, and all kinds of modern hives; depriving, smoking, &c.; and at the same time some of his own excellent honey, brought to us in a large china bowl, clear as amber, delicious, and highly-flavoured.

After giving him a description, in which he was much interested, of the management of bees, as practised in the two famous classic localities of Mount Hybla, and Mount Hymettus; where, as in the latter, I had seen the hives of wattle daubed with mud, thriving almost uncared-for, in scores, on the ground, in a little yard overgrown with thick weeds and nettles; we adjourned to the garden to see his own apiary. He had, in different places, between seventy and eighty hives; and I was greatly taken with the simplicity and success of his management.

On the flat top of the skeps, which were of good size, was a box of inch deal, a foot square, and four or five inches deep, fastened down, and luted with cow-dung. A little window in front was covered with a slip of deal, and the top being moveable, when the box was full, the comb was removed with the aid of a little smoke. For this purpose he used the refuse left on boiling the old comb for wax; the smoke of

which is not only harmless to the bees, but pleasant to use; and in so large a stock always at hand, costing nothing. In the winter the box was removed, and the aperture stopped and luted. The average produce per hive, good and bad together, was about 10 lbs. in a fair season; and often much more. The bees were left in undisturbed possession and never fed. I inquired how he managed when the combs became old, and choked up with the accumulated linings of successive broods, and found he practised the English method of annually cutting out a portion. He made a large quantity of excellent mead every year.

After an hour's pleasant halt we continued our route up the Val, through beautiful woodland scenery. After the heavy rain, every rivulet was pouring down the mountain sides; and a fine waterfall above Vanzone was a broad sheet of foaming cascades from the summit of the cliff, over which it fell in thundering volume. The narrow lanes traversed a complete forest of noble overshadowing chesnuts and walnuts, glowing with the orange tints of autumn. Bright green mosses and luxuriant ferns in the richest profusion carpeted the stone walls and rocky nooks, shaded by the spreading trees; and as we had the day before us, we sent Delapierre and Mora on to Borca, only two hours further, and devoted the rest of it to a leisurely botanical ramble.

At Ceppo Morelli we found a very clean little inn, where we breakfasted on simple fare, improved by extreme civility. In the churchyard was a pile of bleached skulls, in a wire-grated compartment; the top ones, as at Rima, grimly decorated with priests' caps.

Among the profusion of ferns, the first that rewarded our search was the so-called *Woodsia ilvensis;* which I believe to be only a variety of the *hyperborea*. Lovely clusters of *A. trichomanes* covered every wall, together with *A. septentrionale* and *germanicum;* and no one who saw the latter growing, as here, side by side with *A. ruta-muraria* and *sep-*

tentrionale, could for a moment doubt its specific distinctness. All the *Polypodiums—vulgare*, *calcareum*, *phegopteris*, and *dryopteris*—were plentiful among the hosts of commoner ferns, which grew with a luxuriance not before seen by us, except in the neighbourhood of Alagna. Higher up, *A. oreopteris* abounded, which we had hitherto found very sparingly; while the elegant tufts of the parsley fern, *Allosorus crispus*, peeped from under every rock and stone; the *L. helveticum* spreading in green masses on the rocks.

Not far above Prequartero, an isolated block of mountain, like a huge tongue, juts out into the middle of the valley. On the north side, the boiling torrent of the Anza sweeps round it, imprisoned at the bottom of a deep and gloomy chasm; of which there is a striking view from the bridge which spans it at the mouth. The road, crossing the bridge, leaves the Anza behind this mountain block; and mounts by a very rough and steep ascent, up the face of a sort of barrier across the valley, of considerable height; a confused mêlée of soil and transported blocks, studded with rhododendron bushes and trees. This ravine divides the upper Val Macugnaga from the Val Anzasca proper; and the change, from the warm, vine-clad lower valley, to the Monte Rosa region, was most marked. After the luxuriant richness of the profuse wood, the mountains, as we advanced, were strikingly bare and sterile, and the thinly-scattered pine the chief tree.

On coming up the valley from Ponte Grande I had noticed the remarkably rounded contour of the rocks on the mountain sides, and could only account for it on the supposition of glacier action; but it seemed far too distant from Monte Rosa. This barrier, however, now afforded every indication of a great part of it, at least, having been an ancient moraine, and at the top of it some large jutting rocks, at the narrowest point of the valley, and opposite a little ruinous oratory, afforded a full confirmation of my conjecture. These rocks, which are of a hard, red mica schist,

form a salient angle of the isolated mountain mass, at the extremity of its projection across the valley; round which the ice has been thrust, and forcibly ground from above, until the whole face of the hard rock has been worn and polished smooth, where it opposed the glacier. The back of every covered angle, which the descending ice passed over untouched, was left fresh and sharp; and, if any further proof were needed, the worn surface was deeply and thickly channelled with horizontal or slightly inclined grooves and striæ, of unmistakeable origin, and as distinct as I had ever seen in any modern glacier. These glacier furrows, and roundings of the rocks, I subsequently traced from side to side of the valley, up to the present shrunken and still diminishing glacier of Macugnaga; often reaching to astonishing heights.

Just beyond this moraine was a charming little amphitheatre of green turf, hemmed in by picturesque rocks, with cool shady nooks and soft greensward, the very perfection of a place for our noonday halt. Beyond the hamlet of Morgen the valley became wilder and more desolate, up to Pestarena; where the narrow track, which for some distance overhangs the deep torrent, crossed by a bridge (the Ponte del Vald). On a rock close to the bridge were two wooden crosses, which, we were told, were memorials of the death of two men, who had been killed by the irruption of water into one of the mines. The cries of one of them were heard by his wife and child for many days, without any possibility of rescuing him; growing gradually fainter and fainter until he died.

Pestarena was the most dreary and black-looking spot we had seen for long; and I reserved the gold-mines, for which it has been famous since the days of the Romans, for a visit at leisure on our return, glad to get out of its triste vicinity. After crossing several rough torrent beds, and mounting the steep path for a little, we came in sight of the châlets below Borca; standing out on a verdant platform, studded with

trees, and abruptly descending into the valley. On the opposite side, a branch torrent falls into the Anza, from a narrow opening into the Val Quarazza, down which is the descent of the Turlo pass, from Alagna to Macugnaga.

Inn at Borca.

Mora had been safely installed and consigned to rest long before we arrived at Borca; and we found our baggage arranged in a snug little room, at the top of the steps of the picturesque wayside châlet, yclept the "Albergo dei Cacciatori," and kept by the two "Fratelli Albesini," the Nimrods of Val Macugnaga. Delapierre was already initiating one of the brothers, a capital cook, into the mysteries of making Scotch broth with the remains of the mutton, their garden furnishing plenty of vegetables and herbs, while one of the woodcocks was ready trussed for roasting; and it was evident that we were among comfortable people, where there was no chance of our starving.

Nothing indeed could have been more to our taste than

our present quarters, which we determined to make a resting-place for some time. A cozy, clean little chamber, a projection in front of the châlet, and tastefully but simply fitted up, was our sleeping and living apartment. The wife of one of the brothers waited on us with the greatest attention; and between the two *artistes*, Albesim and Delapierre, a dinner was served up, such as hardly needed the relish which the dirty fare at Ponte Grande, and a fast since 7 A.M., had given us. After all, every candid Alpine traveller must confess that the gross materialities of eating and drinking, stimulated as the appetite is by the glorious air and exercise, assume an importance among the daily incidents of travel, which it would be affectation to deny. We often for days together were without animal food, living on rice and milk; black bread, with a shaving or two of sausage; goats' cheese, or even polenta; our keen appetites making it a matter of comparative indifference at the time; but when better food was to be had, we never pretended to disguise the fact that we most certainly preferred and enjoyed it too. A little knowledge of cookery—an art, the possession of which certain philosophers have made one of the chief distinctions between man and the rest of the animal kingdom—which nevertheless Englishmen seem generally to despise—is invaluable in roughing it in the mountains. For example, there are few more simple and easily attainable luxuries than the Scotch broth, or "zuppa Scozzese"—as its rising fame from place to place, under Delapierre's auspices, had now established its title, and for the benefit of others, who may possibly not know how to proceed, the easy process of manufacture we adopted is as follows: As much mutton as is thought requisite is to be put in the large pot or kettle always at hand in a châlet, and covered partly with water; turnips, carrots, beet, and onions, peeled and shred in a liberal quantity, till the meat is covered; salt and pepper added, and the whole left to stew for at least four hours; adding herbs, lettuce, peas, or any other pro-

curable vegetables, to taste; and if beet is not to be had, a spoonful or two of sugar is a great improvement. A very little experience will soon teach any one how to give directions, or superintend, or make it; and many a traveller, especially ladies unfortunate in a fastidious stomach, may be spared a drawback to the thorough enjoyment of their travels. Another advantage is, that on coming in to head-quarters, after a long day's excursion, the savoury mess is warmed up in ten minutes; and the individual must be a gourmand who is discontented without a second course. When going up to the high mountains, a sharp eye should be kept on the gardens in the lower valleys, and the haversack filled. I never knew any one refuse vegetables from their gardens, if civilly asked, or a trifle given. This culinary and gastronomic digression may I trust be excused, on the ground of the public benefit; and we return to the Albesinis, who were delighted with the, to them novel, invention; and declared their intention to make it a standing dish in future.

Our room had no fireplace; and the cold atmosphere, diffused by the near mass of Monte Rosa, struck so chilly in the evening, that we went and sat with our host and Delapierre, in the wide and comfortable kitchen-chimney corner, where a great wood fire blazed cheerfully. Albesini facetiously remarked of their climate, that they required fires thirteen months in the year; two-thirds of which he declared were winter, and the other third excessive cold. The snow lies so deep in winter, that, though they constantly hear black game crowing close to the house, and the ptarmigan and chamois come quite down into the valley, they are unable to go after them. During this rigorous season the game would inevitably starve, but for the providential provision of the long bearded lichens which clothe the pine forests, and on which the chamois browse, while the pine tops themselves afford sustenance to the black game and ptarmigan. The Val Macugnaga has long been famed as a sporting district;

but the chamois have diminished of late years. Marmots abound, and we had them at table daily while at Borca, by request; as they make an excellent stew, though, as they are often served up, scalded and scraped, they look much too like a plump cat. The flavour is a little strong at first, but one soon gets used to it.

The marmot (*Arctomys marmotta*) is a charming little animal, and associated in one's memory with many a wild and lonely Alpine scene, where its shrill whistle is the only sound that breaks the dread silence. It is difficult to get a sight of them, as they are timid and ever watchful, retreating to their burrows on the least alarm. According to Tschudi,* they feed on various Alpine plants, and are in full condition in autumn, when they are very fat. In the summer they cut, with their rabbit-like teeth, a vast quantity of short hay; which, as soon as it is dry, is stored up in their capacious winter burrows. On the first approach of winter, they retire here, and wall themselves in with stones, earth, and hay. Behind this, a passage in the earth, of several yards in length, gradually ascends, till it terminates in a large cavern, oval in shape, resembling an oven. Here they all coil themselves up closely together, in the dry hay, often to the number of fifteen, and pass the winter in a completely torpid state, not awaking again until the following April; their accumulated fat supplying sufficient carbon for their very feeble respiration. Professor Mangili has made the singular calculation, that it breathes only 71,000 times throughout its six months' torpor; whilst, when awake, it breathes 72,000 times in two days. The name marmot is derived, according to Tschudi, from the Tessin appellation, "mure montana," or mountain mouse; contracted to "murmotta" or "marmotta."

Although our hosts spoke Italian to us, yet, when talking with Delapierre, they evidently preferred German; and re-

* Nature in the Alps, p. 232.

minded us we were now in the last of the German Vals, which had hitherto interested us so much. Not much German is spoken below Borca, but it is the language of all the inhabitants in the upper valley.

When the sun rose next morning, Monte Rosa unveiled, and presented a truly magnificent and startling spectacle, as we left the little inn for the Macugnaga Glacier, and advanced up the valley. The panorama, in its colossal magnitude, was superb, when we got an unobstructed view from the open basin in which lie the scattered hamlets of Macugnaga. This view of Monte Rosa can only be compared in grandeur to that of its rival, Mont Blanc, from the Val d'Entrèves; though in our estimation it is much the more imposing of the two. After the late storm it was sheeted from its highest pinnacle to the lower glacier with sparkling snow; hardly a projecting crag was uncovered until the sun began to exercise its power; while the enormous face of the mountain was a perfectly inaccessible precipice, some 10,000 feet in height, and of awful steepness. The view of the summits from here commenced with the Signal Kuppe; the other peaks seen from the Pile Alpe being hidden behind its retreating angle. Next, were the Zumstein Spitze; the Höchste Spitze, with its double points; and now, at a considerable interval, the Nord End, which from the Combetta had seemed but a protuberance of the Höchste Spitze. To the left of Monte Rosa, the smooth snowy cone of the Pizzo Bianco appeared above a forest-covered crest; an exquisite object in itself, and also associated with Saussure's ascent of it, to compare the heights of the peaks of Monte Rosa. All this, however, was but a portion of the stupendous curtain of snow-clad mountains which stretched right across the outspreading head of the valley. From the Nord End, a long and lower, but only less magnificent crest, extended in serried wildness up to the advanced guards of the Monte Moro. In the centre of them was the Weiss Thor, over which is a perilous

and rarely-effected pass into the Saas Thal; and further to the right, the crags of the Cima de Jazzi.

The little plain, environed by these vast heights, was in itself a charming scene; dotted here and there with the numerous little outlying hamlets of Macugnaga; most of the houses, dark, picturesque, wooden châlets, in the German style: and in the galleried balconies of several of them a brilliant show of carnations and picotees, as at Carcofaro. Broad meadows among scattered houses led us from Pecetto, or Zer Tannen, so named in both dialects from the forests of silver fir that used to abound there, up to the foot of the glacier. Delapierre had picked up a peasant as guide, who amused me with his exaggerated accounts of the inundations and consequent devastation that had occurred in the valley. But although there was no small confusion of dates, and embellishment of facts, in his account, much of it was substantially true. Enormous *éboulements* of water, stones, and mud, have swept over, and completely changed, the face of the valley, since the reckless destruction of the forests; covering the fertile meadows, and overwhelming it with barren débris, of which we afterwards found remarkable evidence.

The Belvedere is the summit of an oval-shaped declivity, an eminence requiring a little exertion to climb it; an oasis in the rugged, barren moraines of the Macugnaga Glacier, dividing it into two streams. Its undulating and picturesque surface is clothed with pine and larch; and the ascent, first up a steep, pine clad bluff, and then by wooded glades, undulating hollows, and sunny banks, was very pleasing. At length, on the highest part of the heather-clad mound, we reached the point of view, and it would but be repeating the grand features already described, only in a different combination, to enlarge on its beauty. The nearer we approached the sublime precipices of Monte Rosa, the more incredibly grand did they appear; and seating ourselves on the edge of a lateral moraine, above the present glacier bed,

we spent an hour or two in contemplating the magnificent scene.

We then took to the glacier, which, though uneven and strewn with masses of débris, was easy enough; and crossed over it, encountering hardly any crevasses, to the Alps of Fillar. Here again the scene changed, and we had a splendid view of the immense mountains which shut us in. We recrossed the glacier by a more crevassed route, to a point between the Alps of Pedriolo and the Belvedere. Not far from this, De Saussure selected the narrow base from which he took his trigonometrical observations of the summit of Monte Rosa The Zumstein Spitze, which he took for the highest, he made to be 2430 toises in height, or only 20 toises less than that of Mont Blanc. Modern observations have, however, long since decided the Höchste Spitze to be the highest point, an elevation of 15,160 feet, and that of Mont Blanc 15,744; a difference of 584 feet.

E. returned to the Belvedere under Delapierre's escort, and descended to the valley, while I took down the rough and precipitous moraine of the right side, to examine its materials. The débris scattered over the wide glacier was much more interesting than that on the Lys Glacier, and comprised a great quantity of rocks, containing abundant minerals. Some large masses of mica schist were beautifully studded with pink garnets, as thickly as plums in cake, varying from the size of a large pea downwards, and of an imperfect dodecahedral form; but it was impossible to extract any of them entire.

It was five o'clock when we got down again to the meadows of Pecetto, after a magnificent excursion, the glacier part of it comparatively easy. I stopped at the most favourable point to take a sketch of the pass and mountains of the Monte Moro, which we intended, if fine, to ascend next day; and then we turned our faces towards Borca. A little way down the meadows, below the glacier, a torrent suddenly

burst out into daylight, from under the turf; a singular apparition, and one which has naturally had a romantic legend attached to it. Schott relates the tradition, just as our guide did, that it flows from the "lost valley" in the heart of Monte Rosa, before alluded to* at Noversch.

When its recesses were closed up from all human access by the encroaching glacier, they affirm that the torrent which ran through it, unable any longer to find egress, was compelled to force a passage underground; and after passing under the base of Monte Rosa, first emerged into light at the "brunnen" of Pecetto. It is remarkable that this ancient tradition of the lost valley should have existed, not only at Gressoney, but also at Saas, and even in the Val Macugnaga. The Gressoneyers, who imagined they first discovered it† in 1777, from the ridge of Monte Rosa, might naturally, as they no doubt did, mistake the Valley of St. Nicholas for a new and unknown region in the middle of the mountain; but it is difficult to say how the people of Saas or Macugnaga could have originated a similar legend.

From here back to Borca took us little more than two hours. At night we again betook ourselves to the kitchen-chimney nook, by the roaring wood fire; one of the greatest comforts of the Albergo di Monte Rosa. Caterina Albesini was going with her aunt to the "cresima," or confirmation, held by the Bishop of Novara at Anzone next day: and was radiant with joy at the prospect. She seemed far too young, and hardly capable of understanding the serious and important step. They are admitted as candidates at five years old, an age at which few children can be supposed to have attained any adequate idea of responsibility. Before we retired, all arrangements were made for the Monte Moro next day, and, the pass being said to be quite impracticable for mules, Delapierre declared his resolve that Mora should attempt it, and add to her laurels.

* Page 271. † Von Welden, p. 173.

When we rose at five and looked out of the little casement, the clear moon in the last quarter was streaming down the glen of the Val Quarazza opposite, and the mountains leading to the Turlo were sharply defined and cloudless. By the time we had made a hasty toilet by candlelight, and drunk a bowl of warm coffee, day began to dawn. As we started, the rising sun was just tinging the summits of Monte Rosa, and gradually suffused the whole of its snowy points and precipices with the loveliest blush of its own especial rose hue, which deepened every minute, until golden tints gradually prevailed;—the rich rose changed to fiery orange, the glorious mass looking like an enormous cairngorm: then it paled to an exquisite primrose yellow; and that fading, at last the virgin snow was left in unsullied purity and whiteness, cold and still, yet glistening on its thousand pinnacles, ridges, and fantastic drifts, with the reflected sunbeams; the moon still high and clear in the heavens.

Such a glorious scene alone was enough for one day, but we had before us the prospect of a more magnificent and complete view of Monte Rosa than any we had yet enjoyed in our tour almost round its entire mass; and, moreover, the last of the main passes of the Pennine Alps it was our fortune to explore. The bracing freshness of the frosty air was as exhilarating as the scene was glorious; and all started in such elastic spirits as are known only to the practised mountaineer. Mora, too, had entirely recovered from the severe effects of her strain on the Col d'Egua, and seemed likely to carry out Delapierre's determination that she should again do what no other mule had done in recent times.

A halt was requisite at Macugnaga, to get some rough nails put into her shoes, and an object caught my attention which more than fully occupied the half-hour's delay. By the side of a clear little burn at the foot of the Monte Moro, stood the ancient church of Macugnaga, or Arndorf as it is called, in a most picturesque situation; backed in the distance

THE OLD CHURCH AND LINDEN TREE VAL MAGDONAGA

by the lower mountains covered with pine forests; the limit of the dark *Pinus picea* and the higher larch distinely marked. Above the crest, now covered with fresh snow, rose the summits of the beautiful Pizzobianco and Monte Rosa.

The building itself was of great interest; the pointed doorway with its mouldings, and the traceried windows, were of evident mediæval and foreign origin; the first traces of anything like Gothic architecture we had as yet seen in Piedmont. A noble linden-tree, its time-honoured trunk still surmounted by vigorous leafy branches, at once suggested its connection with the traditions of the old German fatherland, and here unmistakeably was the key to the problem of the German colonies, presented in these simple monuments, with a clearness which the laborious pages of Schott, Engelhardt, or Von Welden had failed to convey.

Resolving to return to it at a future opportunity, I hastened to overtake the others, who were already commencing the ascent. A steep path led through pleasant open larch forests, and thence up the bare mountain side. We had no guide, and Delapierre had not crossed the pass for many years, so that we lost some little time in making out the best line of ascent for the mule. At length we hit the right track, and the fresh-fallen snow soon covered the whole mountain side. The sun had not yet reached it; the crisp hard footing it afforded was a most agreeable relief; and seeing what appeared to be a short and direct cut to the summit, I left E. and Mora with Delapierre to take the usual and more circuitous route. I had not, however, an idea of the real nature of the ground until I tried it. The ledges of outcropping strata, and mêlée of blocks covered with loose snow, often engulfed one bodily—as the outer crust gave way—in an awkward crevice among sharp blocks, and I more than once repented the short cut.

The tracks both of chamois and Alpine hares were abun-

dant on the fresh snow; and on clambering up a long slab, I came suddenly on a pair of chamois within pistol-shot. They started off at full speed, and rattled up the shivered rocks with a marvellous ease and grace, stopping at the summit to take one gaze at the intruder, and then disappeared behind the rugged crest.

The views were increasingly magnificent as I ascended; not even a speck of haze or mist rested on the bewildering scene, and the extraordinary effect of the immense mass of Monte Rosa in so close proximity was overwhelming. The Glacier of Macugnaga lay below, and, as I looked down on the surface of it from head to foot, appeared like a giant road paved with ice, resting on the sinuous and irregular embankments of its vast moraines.

The direction I had taken led me right enough, and after some toil I reached the hard snow and imperfect glacier leading to the summit. A long rounded cliff of smooth glacier formed the last crest, high above me, cut out with vivid distinctness against the inky black sky. The scene from this point was wild and unearthly, and the concentration of the light was more than usually remarkable for a snow mountain of this elevation. It was neither day nor night; one could look at the rayless sun in the deep violet ether, without winking, while the reflection from the snow was proportionately dazzling. We had had many bright days on the Alps, but none like this.

This darkness and almost gloom of the sky, and the small power of the sun's direct rays, compared with that of the burning and blinding reflection from the pure snow, strikes every one with astonishment on their first visit to great altitudes on the Alps; and frequently, though erroneously, is attributed to the contrast of the snow with the atmosphere. But this is not the case in lower regions, when the ground is entirely covered with snow and the sky cloudless; and these

phenomena are chiefly, if not entirely, owing to the great purity and less density of the atmosphere; causing, as Forbes* has shown by his observations, a much diminished diffusion of the solar light which is transmitted directly; while the pure snow greatly increases the diffusion and intensification of the light reflected from it. He found by Leslie's photometer, that, while in one instance when placed on the snow it marked 121°, only 39° of this was the direct effect of the sunlight; the remainder being the diffused sky light and snow radiation. It is thus easily understood how, at high elevations and on pure snow, the broadest brimmed hat does but little to prevent the effects of the sun on the face, unless the reflection of the snow is mitigated by a veil. I indeed found myself so little worse off in a Glengarry bonnet than in a hat, that I always preferred the former, as allowing so much freer vision; and though I many times lost the greatest part of the skin off my face, it became in time less sensitive.

At eleven I stood on the broad platform of smooth, snow-covered glacier which crowns the pass. Looking from the edge of the plateau towards Macugnaga, the face which I had just climbed sloped steeply from my feet; alternate glacier, snow, and whitened rock, stretching far down the pass, until it was lost in the deep valley. Nothing was to be seen of E. and Delapierre, not a footstep or sign of living being, except the wooden cross, on a rock about 200 yards to my right; the cross wreathed with long drifted flakes of snow, like arborescent crystals. The solitude, and the inconceivable grandeur of the whole, were alike solemnly impressive; and there are, I imagine, few more sublime spectacles in the Alps, than that of Monte Rosa, as seen from this point, with such a sun and sky, and after a fresh fall of snow. All the secondary peaks, and even the lower mountains, down to the limits of the larch, were whitened over, as with their winter covering. Among them were many familiar acquaint-

* Travels in the Alps, Appendix III.

ances: huge Taglia Ferro; the Cima del Moud; Cima del Pisse, called the Hameau from the Val de Lys; the Turlo, with the russet-brown Val Quarazza, marked by a tiny thread winding down it from the pass. Beyond the Cima del Russe was our memorable pass, the Col d'Egua; below it the deep Val Anzasca; and beyond, over many a long ridge, the plains of Italy and distant snow Alps of the Grisons and Tyrol. To the north of the beautifully smooth plateau from which rose the Pizzo San Rocco, and beyond the Distelberg, were the distant Swiss mountains of the Valais and Oberland; and nearer, the Mischabel and Alphabel, more clearly seen from the rock above the cross; with the northern outworks of the Monte Rosa.

The sublime majesty of the Queen of the Alps herself, few who have seen it from here would, I imagine, venture to describe. Elevated as we now were, some 5272 feet above the Val Macugnaga, there was yet a height of another 5520 feet to the level of the Höchste Spitze, and between us and its highest point, not more than five miles in a direct line,—a distance which dwindled to nothing on the enormous scale of all around. The immediate presence face to face of this stupendous mass, in the eclipse-like light which glimmered over it, the sun and the moon riding together in the dark indigo sky, formed a scene which appeared hardly of this world.

From the plateau, and several eminences on different parts of it, I enjoyed a variety of changes of view, until nearly an hour had elapsed, and, still seeing nothing of E., I became uneasy; but just as I returned to the steep edge above Macugnaga, I saw her and Delapierre below, like pigmies, both toiling on foot up the deep snow. Without quite considering the steepness of the slope at the summit, or the probability of crevasses on the glaciers, I put my feet together for a glissade, and, with a rapidity which startled me, I found myself shooting down it, utterly unable to stop myself

with my alpenstock. Before I knew where I was I had passed E. some 100 yards, bringing up in a snow-drift; and effecting in a few minutes a distance which it had taken me half an hour to mount. E. plunged steadily and perseveringly up the trying and toilsome ascent, the rarity of the air chiefly affecting her.

At length at one o'clock we all stood on the summit; and under the shelter of the rocks, in a sunny nook which I had cleared of snow, we were all glad to rest for a time, and refresh ourselves with cold chamois and a cup of red wine and snow. After this, and a few minutes' rest, E. was perfectly recovered, and able to join me in an excursion to various points of the plateau. She had been as much struck as myself with the depth and colour of the sky, and the dazzling contrast of the snow cliff of the summit against it; and she described the effect of looking up at me as I stood on the edge of it, watching them coming up, as most extraordinary. We went some little way down the Swiss side, towards the châlets of Distel, the descent very easy, but the scenery was wretched and dreary; and, as we returned, we felt rejoiced that our future course still lay for some time to come among the Italian valleys.

At three we prepared to return, and after a farewell view, descended the now loose snow, softened by the noonday sun, and which lower down had vanished from great part of the scene. Mora had floundered so much in it, that it had been found inexpedient to bring her further, as E. preferred climbing on foot, and, in fact, had not had more than two hours' use of her since leaving Borca. She had been left untethered on a barren plateau, congenial to her meditative turn of mind, with a bundle of hay to assist her to keep out the cold, and we found her standing pensively without having changed her position. Delapierre led her down, leaving us to follow a route of our own more to the right. After some

wandering it brought us to some deserted châlets by a pretty waterfall, and at five we again reached the larch forest.

Seating ourselves on a picturesque old trunk on the mountain side, we took our parting view of Monte Rosa, except from a distance; and nothing could have been more in harmony with our thoughts, than its fading glory in the setting sun. The eastern side, of awful precipice, so bright and radiant in the golden rays of hopeful morning, was now in cold grey shade. The western side of the Signal Kuppe alone caught the sun, which illumined it brilliantly, and also a singular little cloud which hung suspended above it, the upper part hemispherical, with long "cirri" trailing down from it in constant whirling motion, exactly like a bright rosy *Medusa* or jelly-fish. It maintained the same relative size and position for at least two hours, the effect, no doubt, of a spiral current, caused by the conflicting draughts from the two sides. I had frequently observed a similar phenomenon elsewhere, but never in so remarkable a form, and with such distinctness and continuousness.

At half past six we reached Borca, where we found,—thanks to the rifle of one of our hosts, and the cooking powers of the other,—a roast haunch of chamois venison ready for us. It was kept and cooked to perfection; and as we mulled our red wine afterwards by the kitchen fire, under the excuse of keeping off the chill after the day's exertions, we began to think we were getting too luxurious.

When I looked out at 6 o'clock next morning, a dull uniform pall of "brouillard" had settled down on Monte Rosa and the neighbouring mountains, in that peculiarly gloomy manner which unmistakeably showed that any hopes of their clearing for that day were vain. All other excursions being thus put an end to, I left E. to rest after the climb of the Monte Moro; and walked up the valley again to examine more carefully the old church, which had so

struck me on our passing it the day before; and the impressions it then produced were now fully confirmed.

The general tradition of the valley is, that the church was built in the 16th century by German settlers, who came over as refugees in the time of Martin Luther. The traceried

windows of the choir—which are especially interesting, as being almost the only ancient Gothic ecclesiastical remains of the kind in these valleys, or perhaps in N. Piedmont (at least I never met with any other myself)—might very well accord with that date. I sketched several of them, and from the woodcuts annexed it will be seen that the tracery of one of them, the first, is geometrical, not flowing, and might be of much earlier date than that assigned; but the others

show evidently the tendencies of the flamboyant style. The circle within the upper spherical triangle of No. 1 is filled up in No. 4 with flamboyant perforations in place of the quatrefoil; and No. 2 is still more decided. It is well known that the Germans borrowed their Gothic architecture entirely from France at a late period, and the gracefully flowing but weak flamboyant attained its greatest luxuriance in the latter country in the 16th century. The Germans first adopted the Gothic style in the 14th century, following the example of the immediately preceding one in France—the windows of which were of geometrical construction; and, without any of that marked distinctness which has so clearly separated the different styles in England, they, late on, frequently used them, as here, side by side with the flamboyant. There is nothing, therefore, contrary to the general tradition in the church itself, as regards architectural details.

The campanile, in fact, bears the date of 1580; but this is not conclusive, as it is clearly a subsequent addition to the building. Like all the campaniles which are so numerous in these villages, it is in the unartistic Lombard style; a square, unadorned, uniform tower, and, as is characteristic of that style, without buttresses, and finished with a low pyramidal roof. As is almost universally the case too in the Lombard towers, it forms no part of the design of the building, standing in rear; and from the inscription inserted in the base,—"1580: Qesto edificio e principiato ali 7 jugno,"—it was evidently erected after the church; probably to conform with the universal fashion of the valley, and was built by Italian workmen.

But though the date of the church may agree with the time and circumstances assigned by the popular tradition, it can hardly be supposed that the Reformation movements of the period of Martin Luther could have been the origin of the German emigration. We have such ample details of the history of the Reformation in Switzerland, as Schott says, that,

if ever the Reformers had attained sufficient influence to drive out the Catholics from the Valais, we must have had some record of it. On the contrary, the actual result was, that in 1603 the Catholic majority in the Valais compelled the Protestants to abjure their faith or emigrate. But the idea that they should have crossed the Alps as refugees from attachment to the Reformed doctrines, and yet established a community which from all evidence has been essentially Roman Catholic from the first to the present day, cannot be entertained for a moment: though Schott supposes they might have ultimately yielded to the Roman Catholic influence of the Italian Val Anzasca. This theory is utterly untenable, and the mere date of the later campanile (1580) disposes of it.

The church is generally asserted to stand on the site of one of much earlier date; but, whether such were the case or not, it is most interesting, as showing by its architecture and other marked indications, where was the lighting place and head-quarters of the first German emigrants from the Valais. Beside the traceried windows, the south door of the church is a pointed arch with a drip moulding, and on either side of it in the outside walls is a recess for a holy water stoup.

In addition to the architectural details, another remarkable and important object is the patriarchal lime-tree, which stands on the eastern verge of the little enclosure; with a stone seat raised above the ground under its shade It was an ancient and well-known practice among the Germans and German Swiss to plant the "linden" as the symbol of the trysting-place where their communal assemblies were held. The traveller acquainted with Switzerland will remember a special instance of this in the noble linden at Appenzel, four hundred years old, and standing in the square where the "Landesgemeinden" or gatherings of the Canton were annually held.

The venerable old tree at Macugnaga, with its gnarled many-stemmed trunk, which has here braved the vicissitudes of probably more than three centuries' exposure to the wintry

atmosphere of Monte Rosa, the icy winds, and the tardy springs of this elevated region, is,—with the exception of a much younger one near Vanzone, probably a descendant of it,—the only one of its kind of any size we saw in any of these Vals. Tradition says that an old woman,—whom Schott interprets to be the symbol of the early migration,—brought it as a sapling, a span long, over the mountains. Nor is there any reason to doubt it. The slowness of growth in the Alpine region, and the long winter rests, while they retard growth, yet greatly tend to favour longevity in vegetable life. Thus we may regard this tree, like the old church itself, as a relic of the first Teutonic settlers in the valley.

The emigration is doubtless assignable to no particular period, but was gradual and continuous. De Saussure with his usual sagacity observes:* "L'origine de ces Allemands est absolument inconnue; mais l'opinion la plus vraisemblable est que ce sont des habitants du Haut Valais, qui, en traversant les Alpes, ont vu que les sommités de ces vallées étoient inhabitées, et s'y sont établis dans un temps où les habitants de l'Italie, accoutumés à un climat plus doux, n'osoient pas conduire leurs troupeaux, ni se fixer eux-mêmes, dans ces pâturages entourés de neiges et de glaces." The recent laborious researches of Schott, Hirzel, Escher, Welden, and others, have but confirmed this conjecture; and I think it most probable that the first great attraction was the fame of the rich gold-mines of Pestarena; when the German adventurers, finding the head of the Val Macugnaga unoccupied, settled down as squatters. As they increased in numbers, and were joined by fresh emigrants, a natural move would take the supernumerary population from Macugnaga over the Turlo to the valley of Alagna, and also by the Little Turlo to Rima; in both of which places they had doubtless in their explorations found the ground was deserted, as Saussure suggests, by the more luxurious Italians. From Alagna, the

* Voyages dans les Alpes, vol. iv., §§ 22, 24, p. 386.

next and obvious advance was by the Col d'Ollen or Val Dobbia, to Gressoney and the Val de Lys; from which, in the course of time, a tribe crossed over by the Furca de Betta, into the Val d'Ayas.

Schott indeed imagines that the "Allemands d'Ayas," and perhaps those of the Val de Lys, came over the Mont Cervin. But there seems to be not the least evidence to support the supposition. There are no traces of German colonists in the Val Tournanche, nor in the upper Val d'Ayas; the "Allemands d'Ayas" being moreover in a position in the Val which only an emigration from the Val de Lys was likely to have taken up. The colonization must undoubtedly be traced from Macugnaga in successive steps; and in confirmation of this I may quote Schott's own remark, that, among the parish documents of these colonies, those of Macugnaga reach back to a greater age than any others, and next to them those of Alagna.

Thus the apparently anomalous distribution of these singular settlements, around the southern roots of Monte Rosa, and in close contiguity with, and yet thoroughly aloof from, a race of totally opposite character, may be as simply as it is naturally accounted for; not as isolated communes unconnected with each other, but as a chain of successive emigrations of a people who quitted their own country either from necessity, or impelled by the spirit of adventure. In the wild recesses of the upper Vals they established themselves, where their own native industry, hardihood, and active habits, could alone enable any population to live and thrive; and from which the less energetic Italians of the warm southern valleys had kept aloof.

Macugnaga in former times was a much more important and populous commune than it gives any indication of at the present day. When the gold-mines of Pestarena were at the period of their greatest productiveness, the valley was a busy hive, the rich treasures of which attracted a great con-

course from all parts. Indeed the pass over the Monte Moro into the Valais was so much frequented, that a rough mule track was constructed over it; and when not so covered with snow as on our ascent of it, may still be seen near the summit. A great fair for cheese, cattle, and other commodities, was also anciently held on the plain close to the church; and attracted great numbers of merchants and others from the Valais.

The yield of the mines having diminished to a barely remunerative amount, the surplus population has retired from this wild region, only the mineral wealth of which could support any number of inhabitants. Amongst the later sufferers from the exhaustion of the gold-mines, was the family of the Albesinis, one of old standing and influence in the Val Anzasca, where they lived near Vanzone, and carried on extensive works at Pestarena. The father of our hosts had continued his operations too long, in hopes of once more hitting on a rich vein; and lost his patrimony and all his fortune in the venture. Even now the native population is more than can subsist on their own produce and resources; and, as we have seen in all the other German colonies, the male population migrate to distant countries to seek employment, and make fortunes or competencies, to supply the "res angustæ domi."

German is spoken more or less in the upper valley from Morgen. In the higher part of it, at Borca, Macugnaga, and Pecetto, it is almost exclusively the native tongue; and many of the women can speak nothing else. At Pestarena a mixed language prevails, as a great body of the workmen are from the Italian plains. The German of this district, though much corrupted, is yet purer than that of most of the others. I have already, in speaking of the colony of Alagna, mentioned the degrees of purity into which Schott has classified the different dialects of the German Vals; and a specimen of each from the respective communes, as given by him, will

serve to illustrate their differences from each other and the pure German. He selected the parable of the Prodigal Son, which was rendered by the most competent persons he could find in each Val, into their peculiar idiom.

Mawnaga. —" E man hed g'han zwei chind. Ds jungsta hed g'seid sim fattor: mi fattor, gemmer was mir chunnd fon ewer sach; der fatter deld im sis gued Eis par tage derna der jungsto dere zweie chinde hed alls z'semme g'macht was er g'ha hed, unn is g'ganged fil wit, wa-j-er hed fertan si sach und ferlumpud."

Gressoney.—" E ma hegg'hebed zwei buebe. Dr-jungsto hed dsim atto g'seid: atto, gemmer fan ouwem gued was-mer g'herd, unn der atto hemmo g'gád was mo g'herd. Etliche tage dernae der jungero fan disi chinne heggecht alls was erg'hebe hed, unn is wit g'ganged, unn er hed alls usferlumpod."

Issime. —" E ma hegg'hebbe zuei chinn. 'S jungsto jid dsim atte, min atto, gemmer nas-mer chinnd ons guds, unn der atto hemmo teild dsis gud. Etlige tag derna s'-jungste der zuei chinno lest z'semme alls nas der hegg'hebbe, unn is g'gangan eweg uol uit, ua-ds hed g'gesse all sis gud mid de suache fummele."

Alagna. —" Ain man hed g'habe zwen sin. Und der mindrn hed g'said sinem atte: atto, gimmer den tailj der mier chind, und er hed g'machud die tailjini sinder erbshaft Und fan do e-ljizil tage, alls z'semmend g'laid, der minder sun ist g'gange in fremdi lender und da hed er alls g'gasse in di lustparkaite."

Rima. —" Do is g'sin ain man, das do had g habed zwen son. Unn der jungsto had g'said dem atten, atto, geb mier der tail mis guads, das mier gherd, unn der atto hed g'taild sin war. Und nid van veljun tagun der jungsto son, alls zueg'samlods es g'ganged in wite lander und da had er alls des sinan g'gessed in liederliehs leban."

Rimella.—" E ma hed zuei chend (buebjen) Ds jungsta hed gseid sim vatter mi vatter, gemmer nas-mer chonnd vam giod; der vatter deild im sis giod Es par tage dernan ds jungste diser zueio chennd hed alls z'semmog'machd na-er hed g'hebed, und is g'ganged vil uit, na-er hed vertad si zig."

The whole plain around the old church, and also the churchyard itself, is covered deeply with the débris and boulder wreck brought down by the tremendous outbursts of water which have devastated the fair pastures of the upper valley, since the injudicious, and now deeply regretted, cutting down of the forests. The floor of the church is at the present time much below the level of the external soil. It is not now used for regular service, a large church having been built in another part of the parish. But the old church is religiously preserved, and was then in perfect order. At the east end of the churchyard was a sort of "lich-gate," and, facing one on entering, stood an open charnel-house: a shallow recess as at Rima, Vanzone, and elsewhere; covered in front with iron-grated gates painted bright green; behind which grinned a pile of neatly arranged ivory-white skulls, tier above tier; the top ones crowned as usual with old priests' caps. On the walls, and crowding the windows, were fixed numbers of the little triangular-headed, wooden crosses, with the names and dates of the departed carved on them: the simplest possible form of monument, perishable certainly, but after all lasting as long as in all probability any one would be found who cared to know the name, or bestow a thought on the memory, of most of them; for truly, as old Sir Thomas Browne quaintly philosophizes,—"to subsist in bones, to be but pyramidically extant, is a fallacy of duration."

The heavy mist on the mountains turned in the afternoon to drizzling rain, and drove me back to Macugnaga. I gathered on my way a quantity of fine roots of the *Asplenium germanicum*, which, with those previously collected, and others of *Woodsia* and *septentrionale*, were planted side by side, as closely as possible, in a chip box which held above 100; and, with occasional watering and air whenever we stopped, they all travelled safely, and most of them have since grown. E. had found in the neighbourhood of Borca *A. filix-mas* and *filix-fœmina*—a rarity, as it was only their third occurrence.

I had picked up in the pastures some fine fresh puff-balls, *Lycoperdon bovistæ*, and Albesini made an excellent dish out of them; for they have not the same prejudice against this fungus in Piedmont, as they have against mushrooms. His mode of dressing them was to fry them in oil or butter, with chopped herbs and onions, and a little vinegar and seasoning. Few persons are aware what a good and delicately flavoured, as well as wholesome dish, they neglect in the common puff-ball. The large ones, taken in the fresh growing state and cut into slices and fried, as Badham recommends,* in egg and bread-crumbs, have the flavour of a rich light omelette. It is most digestible food, and the timid need have no apprehension whatever as to its being the right kind or not, as all the fungi of the *Lycoperdon* class, which are of a spherical form and have no stalk, are perfectly innocuous. To a Soyer or an Ude this abundant esculent would, if better known, make an invaluable addition to their resources; for as Vittadini says of it,—"La sua carne candida e compatta si presta facilmente a tutte le speculazioni del cuoco."

Again, the day following, rain stopped our intended excursion up the Val Quarazza, and our good fortune seemed to have forsaken us at last, the weather having evidently broken for some time. We therefore gave up excursions for the present, and made arrangements for continuing our tour, as we had much still before us, and the recent fall of snow had begun to make us apprehensive lest the pass of the Gries, by which we were to recross the Alps, should become impassable for a mule by the end of the month. Our preparations were simple enough, except the skins of the two chamois on which we had been living during our stay at Borca; and though we had got them into tolerable order, and dried them in the little gallery outside the chalet, it took the Albesinis, Delapierre, and myself, the best part of the morning to get them clean and fit for packing. When

* Badham's Esculent Funguses of England, p. 125.

properly seasoned they became most useful acquisitions for covering the baggage, as it accumulated towards the last.

When Mora, now in excellent case, came round to the door ready packed, as the rain cleared off after mid-day, we felt quite reluctant to quit our snug little châlet and its hosts. With a plainness and simplicity which to our taste was far more in unison with the spirit of the grand scenes with which a mountain life surrounds one, than the great hotels now the fashion, the Albesinis contrived to procure a number of little comforts, quite unexpected in such remote quarters. We recommended them to open a second inn for the summer at Pecetto, so as to be nearer the pass and glaciers, and it was agreed by all in council, that, with the additional attraction of the now famous "Zuppa Scozzese," it need fear no rival. The inn at Macugnaga was then simply miserable: the old lame and deaf man who entertained Forbes being dead.

The brothers insisted on our drinking a glass of "kirschwasser" round, as a stirrup cup before starting, and then,—bidding a hearty good bye to these worthy fellows, the good woman of the house, and little Caterina,—we turned our steps down the Val again; with many a pleasant reminiscence of the little Albergo dei Cacciatori, and also of those magnificent scenes, which like glorious visions constantly recur to one's mind in after days, with almost the vividness of reality.

Before reaching Pestarena again, we were stopped at a mountain torrent crossing the track, by an immense barricade of wood, which had been floated down after the heavy rains, for the works at the mines. The mode of bringing it down the rocky stream was simple enough, yet singular to witness. Every now and then such an accumulation as now arrested us, choked up the bed of the torrent, when the woodmen, provided with a heavy one-sided pickaxe, or "croom," at the end of a long shaft, dropped it into the great logs, and hooked them down one after another with great despatch and dexterity,

sending them flying down the stream. Though it seemed as if they would every minute bring the heavy stack of timber down on them bodily, it was surprising how nimbly they avoided danger by a spring right or left, and how quickly and easily they cleared a path for us to pass.

At the dismal cabins of Pestarena, Mora stayed to have her shoes replaced, while I went down to the gold mines and works at the bottom of the ravine of the Anza. At first I could only find an overlooker to show me round, who insisted, in a most barbarous patois, on my believing that every sparkling crystal of pyrites was solid gold, and gave such marvellous and romantic answers to my inquiries, that I was soon glad to get rid of him, and observe what I could for myself. The gold is found in a compact gneiss, in combination with iron pyrites, and the process of extraction is carried on in a number of sheds and workshops along the Anza; where there is the double advantage of water-power, and the close proximity of the outlets of the mines. The adit then worked was a tunnel seven feet high, extending, I was informed, many hundred mètres into the bowels of the mountain; which is of a hard close-grained gneiss, such as I found on the right moraine of the Macugnaga Glacier. At the mouth of this tunnel a number of women were busily employed, sorting the lumps of ore, and picking out the refuse which is thrown into the torrent. The auriferous pyrites, the richest of which is very friable, occurs either in pure lumps of irregular cubic crystals—of which I got some fine specimens,—or thinly foliated or sprinkled in quartz, but rarely, if ever, in native purity. With it I found ores of arseniuret of iron and sulphuret of antimony, with argentiferous lead ore.

At last I fortunately met with the director of the mines, who most obligingly gave up a levelling survey in which he was engaged, and accompanied me over the works. Within the first shed we came to was another entrance to the mines, by a mysterious-looking trap-door, and by a series of successive

descents it went down to the perpendicular depth of 100 mètres. The ore, picked and washed, is ground down to the fineness of coarse grit-sand; when it is mixed in a bin with quicklime, said to neutralize the action of the antimony on the mercury used in the amalgamating process, by converting the sulphuret into a sulphate. Under the same roof were four long parallel rows of tubs, exactly like churns, in the bottom of each of which was a pair of small granite millstones, set in motion by a simple mechanical contrivance. The tub is filled with water, and into each a fixed proportion of mercury and ground ore is put, and worked together for twenty-four hours; by which time the quartz, pyrites, and earthy matter are washed off. The gold remains behind, amalgamated with the quicksilver, which is separated from it by squeezing it through chamois leather bags. The loss in the mercury, I was told, was fully 10 per cent., which seems great, but probably results from the quantity of antimony contained in the ore. 100 kilogrammes of reduced ore yield from 30 to 60 francs value of gold; but beside the expenses of working it, a tenth has to be paid to government.

There are several different mines by which the auriferous ores of Pestarena are worked, and the Cav. di Saluzzo, in his survey of 1845,* mentions as the principal, two on the right bank of the Anza, called Minerone and Pozzone; and two on the left, named Peschiera and Acquavita. The galleries of the first extended in 1835 to a distance of 530 mètres, gained by a shaft of 250 mètres in depth. The five "filoni" of the Pozzone have been driven under the river, which has frequently broken in on them and caused loss of life. The mines of Peschiera were only commenced in 1847, and 40 mètres under the Anza they encountered the galleries of Pozzone. The produce of this mine was five times richer than that of any of the others. The Miniera dell' Acquavita

* Le Alpi che cingono l' Italia, i. 163.

is, after it, one of the most productive. The approximate estimate of the total produce of the various mines, according to Saluzzo, was, at the time when he collected his information, about 2700 oz. per annum, employing some 200 or 300 workmen, and about 200 "molinelli," or amalgamating mills.

In all these mines the gold, which is rarely discoverable by the eye, is contained in sulphuret of iron, mixed more or less with quartz, arseniuret of iron, antimony, and argentiferous sulphuret of lead, or galena.

Amoretti gives a curious account of the mode in which they discovered veins of ore on the mountain side.* On dark and stormy nights, he says, when the electrical condition of the atmosphere is disturbed, the miners, placed on an open position, watch for flames or scintillations on the opposite mountain. Marking the place carefully, on the following day they search for traces of decomposed pyrites, and if successful, as often happens, they commence excavations at once.

He somewhat fancifully derives the name of Macugnaga itself from "mala cunicula," as in ancient times, when these mines are supposed to have been well known, convicts are said to have been condemned to work in them. Schott, however, has suggested an etymology more in accordance with the actual site of Macugnaga itself, deriving it from the words "mac und ac"—"mac" being, as he says, Celtic for "bach," or brook, and "ac" for dwelling. The name Pestarena has a much less doubtful analogy with the Roman "pistrina," or mills, which were frequently worked by slaves, and is peculiarly appropriate here, where even in recent times the "molinelli" have amounted, as before stated, to nearly 200.

Of the people employed in the mines at the time of our visit, great part were strangers, some from the Tyrol and other parts of Germany, and many from the Canavese and the

* Viaggio ai Tre Laghi. Carlo Amoretti 1801, p. 62.

country about Ivrea. The ore was chiefly carried by women, in large baskets, from the various mines up and down the stream, to the reducing sheds. As is always the case in mining districts, the occupation evidently had an injurious effect on the manners and character of the people, who were, for the most part, a rough set compared with the Val Anzascans. The native women of the Val, however, who were employed, were readily distinguishable from the rest, in costume and superior carriage and demeanour. The day we arrived at Borca the miners were keeping "Saint Monday" at the little inn, and a drunken row, the result of their orgies, was the first and only instance of such excess we ever saw in Piedmont.

The scenery just about Pestarena is a blot on the beautiful Val. The mountains are stripped bare of their forests, but a few ragged stumps remaining. After the picturesque German châlets of Macugnaga, which are built chiefly of rich brown pine wood, the stone-built cabins were mean-looking and dirty, like the cottages of an English coal-district; and the "Albergo delle Miniere," with its grim exterior, and its interior group of smokers and drinkers, reminded one exactly of "the Jolly Colliers."

Yet, standing on the bridge which spans the torrent, no sooner did the glorious mass of Monte Rosa emerge from the rolling wreaths of cloud, and stride in majesty across the entire head of the valley, than the rough foreground was forgotten in presence of that sublime spectacle.

The lower reach of the Val Macugnaga, which, as we had ascended from the rich Val Anzasca, had seemed wild and forbidding, now appeared, by contrast, a charming combination of mountain, forest, and valley, becoming richer and more varied as we rapidly descended. We remarked, that, all through this Val, Mora was the only mule we met with, either on going up or coming down; the women, generally clad in trousers, carrying everything on their shoulders.

I had now had an entire survey of the Val Macugnaga, from the glacier at its head down to the rocks already observed at Morgen,—its easternmost hamlet, whence most probably comes the German name,—and throughout, the traces of glacier action on the worn and polished rocks were most distinct, the schistose beds being rounded, often to a vast height above the present torrent bed. This was especially observable on the steep walls of precipice shutting in the basin of Macugnaga to the north of Pecetto; also in the gorge of Pestarena, where much of the savage, gloomy barrenness of the mountains is owing to the denuding effect of the ice on the ledges of rocks; and again at Morgen. Even down to Ponte Grande I observed a strong similarity to the conformation of "roches moutonnées," in the faces of the opposite mountains, but had not leisure to examine them. Looking at, and reflecting on, the vast traces the ice has ineffaceably impressed, in the course of a series of ages, on the iron-ribbed sides of this great valley, one is lost in wonder at the idea of the enormous body which must once have filled it, and the magnificent spectacle it must have presented, especially in the wide glacier sea which probably overspread the basin of Macugnaga.

I had stayed so long behind at the mines of Pestarena, that I did not overtake E. until at the foot of the steep, rough path down from Morgen, where I found her sitting alone by the bridge over the Anza, enjoying the cool draught of air which issued from the dark deep gorge; and Mora presently arriving, we continued the descent and reached Ceppo Morelli at four o'clock.

Amoretti* derives the name of this place from the enormous masses of granite "di color vinato," which are found there: but though the learned librarian doubtless knew his own language, it seems much more natural and probable to

* Viaggio ai Tre Laghi, p. 59.

derive its name literally as "ceppo moraiuolo" or "morello," the mulberry trunk, probably from some ancient tree of that kind once existing here; for a little lower down at San Carlo are extensive orchards of mulberry.

At a solitary wayside church near this, called by the Germans "Uf'm gruppe," the other linden, alluded to at the old church of Macugnaga, stands picturesquely within its enclosure. It is a fine and vigorous tree, though evidently of considerable age, and is not improbably a scion of the old parent trunk at Macugnaga.

The beautiful woodland and mountain scenery of the Val Anzasca grew more and more lovely on descending. The deep forests of chesnut, tinged with the red and orange hues of ripe autumn, the ferns on either side the path, and the grand views of Monte Rosa behind us, were enchanting. The first trellised vines appeared at Vanzone; where we went in to see the decorations of the church now finished. The moulded ceiling was richly painted and gilt, with blue and green ultramarine ground; the pulpit and pillars were hung with fine crimson silk, with deep gold fringe; and the effect, though gorgeous, was yet in good taste, the combination of colouring being so harmonious. Such splendour of decoration was certainly most striking in such a situation.

Near St. Carlo, the next village, mines of rich yield have been long worked; called "La Miniera de' Cani;" and the tradition is, that under the emperors the Arian heretics, who, as an epithet of opprobrium, were called "Cani," were condemned to work in them, and hence their name; but Amoretti states that in reality they formerly belonged to a rich and powerful Lombard family, in the 15th century, called Cani. The mines here are exactly analogous to those of Pestarena. The gold is combined with sulphuret of iron, and silver also is found sparingly in combination with sulphuret of lead. The Monte de' Cani seems, in fact, to have consisted of one immense deposit of auriferous pyrites, which

has been tunnelled through in every direction from the base to the summit, occasionally some of the tunnels completely traversing the mountain from west to east, until they emerge into open air in the contiguous Val Bianca. Some of the galleries are more than 25 feet wide. The annual produce, according to Saluzzo,* was about 600 oz., employing 56 workmen and 44 "molinelli." The mines are of considerable antiquity, and are said to have been worked by the Saracens.

We drew up for a short halt at our former quarters at Ponte Grande. The landlord and waiter came out to receive us; but as soon as Delapierre had dexterously recovered the missing articles, we departed, to their evident chagrin, and continued our way down the Val. We had originally hoped to reach Pie di Mulera, but it was now far too late to do so and at the same time enjoy the scenery with any satisfaction. Passing a very beautiful waterfall from the Val Bianca on the left,—then pouring down in sheets of foaming water after the rain,—we shortly reached a wayside inn a little below Calasca, and, finding quiet comfortable accommodation there, decided to make it our halt for the night. The people were civil and obliging, the rooms clean and good, and we were only too glad to light on such a refuge from the inn at Ponte Grande. We had further reason to congratulate ourselves, for we had not been settled more than half an hour before the rain descended in a literal deluge.

All night long the drenching downpour continued without a moment's intermission; nor did the morning give any hopes of even a brief respite, and after waiting in vain we at last made up our minds to stay where we were for that and the next day, which was Sunday. Not a break allowed us to set foot out of doors, and we had ample occupation of various kinds to keep us fully employed, until evening closed in again, wet, wild, and stormy as ever. A report reached us that

* Saluzzo, Le Alpi, &c., p. 167.

the road down the valley was impassable from the floods, and, to confirm it, no one arrived from below all day.

Sunday dawned on the same drenched scene: the opposite mountain sides were now intersected in every direction by milk-white torrents, while dense inky rain-clouds choked the valley. We were nevertheless glad to have a quiet uninterrupted day, and felt anything but disposed to make a grievance of the weather, after the almost unprecedented continuance of brilliant skies which had so long favoured us.

Just opposite our window was a little chapel of the Madonna dell' Assunta, to which we paid a visit in the evening, when the rain relented for a time so as to let us have a brief walk. The chapel is built up against an enormous boulder, which has a miraculous tradition attached, and rests in a most singular position, overhanging the brink of a very deep and romantic chasm, at the bottom of which the Anza was thundering in a turbid flood. The view from the narrow bridge which spanned it was exceedingly fine. The chapel itself had been recently decorated internally by the same artist, and with almost as rich sumptuousness, as Vanzone. No service was held there on the Sunday, as it was only used for special occasions; and we were more at a loss than ever to imagine how these Alpine chapels, so far away from any population, came to be decorated in so gorgeous and costly a fashion. The little recess where it stood at the foot of the hill was shut in by cool, shady, moss-grown rocks, covered with ferns and broad masses of the *Lycopodium Helveticum*, the delicate and intricately matted carpet of vivid green sparkling with the fresh rain-drops. We extended our walk as far as the cascade of the Val Bianca, which, beautiful as it had looked on the first evening we passed it, was now far more imposing, its volume being more than trebled. The road passing just at its foot, it is admirably seen in its full height and beauty.

The rain again set in and streamed down incessantly all night, but by the morning the clouds seemed at last to have

exhausted their stores, the deluge had ceased, and a gleam of sky tempted us to set out at seven; though every one who had gone down the valley to Vogogna the day before had been compelled by the floods to return. The scenery of the lower Val Anzasca charmed us. The road is carried at a great height up the mountain side in a sinuous course; now round projecting spurs, and now deep into the receding bays; and nearly all the way on the brink of a vast precipice, its base lost in the deep rugged rift where roared the Anza. The mountain sides were clothed with rich wood, chesnut and other deciduous trees, and on the southern slope above us rose tier over tier of trellised vines, interspersed here and there with a bright cluster of Italian houses, or a pointed campanile. At the quaint-looking, scattered village of Castiglione, the roofs of the cottages and houses were wreathed over with thick bowers of vines, supported on poles, with a luxuriant and novel effect.

The deep bends of the road brought ever varying views of the lovely Val, and an additional charm was imparted by the innumerable streams which poured down the opposite mountains like continuous cascades after the weight of rain that had fallen. Beautiful as we thought the scenery of the Val, its population also more than justified the first impressions made on us at Ponte Grande on the day of the "festa." There are I imagine few such races of peasantry to be found, in the world; and their universal neatness and cleanliness, and the beauty and distinctive type, almost Grecian in many points, of the female portion, more than deserve the encomiums bestowed on them by all travellers who have seen them.

The old mule track from Castiglione used to lead by the hamlet of Cima Mulera, and from thence down an excessively steep descent to the foot of the Val; but by cutting two tunnels in the projecting face of the precipice overhanging the Anza, a good and easy road has been carried straight down from Castiglione to Pie di Mulera, where the Val Anzasca opens out into the wide and sunny Val d'Ossola.

In the names Cima di Mulera and Pie di Mulera, Brockedon has imagined* he could find traces of the location in the Val Anzasca of the Ictymuli, "whose gold-mines were so extensively wrought that Pliny says a law existed among them which forbad their employing more than 5000 men." He adduces the testimony of D'Anville and Cluverius, who place the Ictymuli at the head of the Val Sesia, and says that it has always been a subject of difficulty with ancient geographers. But even had the Ictymuli worked the mines of Pestarena, which is far from improbable, yet they were much too distant from these positions at the very foot of the Val to have been likely to have given their name to them; and the occurrence of the two names so close together, one at the top, the other at the bottom, of the steep ascent of the rocks by the ancient pathway, evidently indicates a local derivation. This ascent has always gone by the name of the "Mulera," as Amoretti calls it; which might seem to be connected with the steep mule track. But there cannot, I think, be much doubt that it is really derived from the word "muller," which, in the German dialect of the Val Macugnaga (of which Pie di Mulera was the mother parish), means a precipitous or scarped rock, and exactly applies to the steep declivity, at the top of which stands Cima di Mulera, with Pie di Mulera at the foot.

The rolling clouds which wreathed up the mountains had prevented our seeing into the Val d'Ossola until below Castiglione, when the glimpses of it which then appeared were strikingly beautiful: a vast river swollen by the floods sparkled in the sun; Italian groups of houses were dotted over the rich plains; and beyond, to the east, a long range of picturesquely pointed peaks shutting it in, closed up the view. We now bade adieu to the fair Val Anzasca, and entered on different scenes.

* Passes of the Alps, p. 261.

CHAPTER XIX.

VAL D'OSSOLA. — VAL STRONA. — VAL MASTALONE.

Pie di Mulera — Floods — Migiandone — Mines — Simplon route — Ornavasso — Marble quarries — Monte Orfano — Omegna — Lago d'Orta — Church — Start for Campello — Scenery of Val Strona — Destruction of track — Inaggio — Timber "serra" — Forno — Landalip — Campello — Strange quarters — Col di Campello — View of Monte Rosa — Rimella — View from churchyard — Descent of Val Mastalone — Night perils — The Gula — Varallo.

AT the "Croce Rossa" at Pie di Mulera, Delapierre, who had gone on early in the morning, was waiting with Mora; and as our baggage had become so much augmented in spite of all our care, he had engaged a Val Anzascan woman as portress, who cheerfully carried a great portion of it on her back down to Ornavasso, a distance of three hours. The "Croce" only afforded a can of coffee boiled in milk, with stale bread, for breakfast, the extortionate demands for which roused Delapierre's indignant resistance.

Instead of joining the Simplon route, which descends the Val d'Ossola past Pie di Mulera, we crossed the now swollen Anza, which overflowed the plain where it joined the Tosa in wide-spreading floods of turbid water; and keeping above the right bank of their united streams, now a rolling river, we skirted the foot of the western mountains bounding the Val d'Ossola. We had been warned that the waters were so much out that there would be great difficulty in getting on; and not without reason, for every mountain burn was swollen to a big torrent, constantly flooding the track. One stream in especial, near Rumignanco, swept across the line of our advance like a river, and so discoloured that to guess its depth was impossible. To myself the

plunging in at once and scrambling through was an enjoyable amusement suggestive of salmon-fishing; but Mora's usual pluck and steadiness seemed to desert her, and our unlucky baggage-carrier declared that had she known how high the floods were she would never have come. It took me far above the knees, and the stream was strong as broad. As soon as he saw me safely landed, Delapierre followed, holding on by Mora, and with the help of his alpenstock they steadied each other through. Last, and after much hesitation, our fair portress—who would have managed far more decently and comfortably in the disposition of her dress had she ever seen a Highland lassie crossing a burn in a spate—took courage and managed to struggle through, the weight she carried materially helping her in keeping her footing; and after this we had no such serious obstacle again. At first we enjoyed the transition to the scenery of the Val d'Ossola, wide and free as it seemed after the deep glens of Monte Rosa. The bottom of it was an almost dead flat plain nearly a mile broad, with a lofty mountain wall on either side, of singular ranges of cone-shaped peaks of gneiss or syenite. The path led for a considerable distance under acres of horizontally trellised vines, supported on poles, forming a continuous leafy roof overhead, with barely room to ride under amongst their many pillar-like stems and props. On the opposite side of the valley the ancient castles of Vogogna, once a walled stronghold, and the scene of many a wild contest in the history of the Val d'Ossola, were conspicuous and most picturesque objects.

The old gnarled and hollow trunks of the sweet chesnuts by the way-side were covered with luxuriant parasitic ferns, especially *A. trichomanes.* We had frequently remarked the domestic habit of *A. ruta-muraria*, but nowhere more so than in this short walk. On the stone walls in the open country we rarely or never found it growing; yet in each village we passed through, the walls were densely clothed

with beautiful sheets of it. Like the swallow it seems to have associated itself with the haunts of man, and forgotten its old wild habitats.

From Anzola a pleasant meadow path traversed rich grass fields, and fertile patches of maize, millet, and other grain, undivided by fences; until we reached Migiandone, where we came up to the banks of the broad deep Tosa—which we had been skirting most of the way—at the point where the great ferry of the Simplon route crosses it since the destruction of the bridge. At Migiandone valuable lodes of nickel and copper have been lately discovered; and a concession of them having been obtained by an English company, mining operations have been already commenced, and are, I believe, in active progress. Dr. Francfort, who has reported on them, states that the principal one wants nothing but systematic development, and the application of correct metallurgical principles, to make it one of the richest and most profitable copper and nickel mines.

The ore occurs in a tract of dioritic syenite, in what are termed segregated veins or lodes, containing copper pyrites, magnetic pyrites, octohedral crystals of magnetic iron, horneblende, garnet, quartz, felspar, and mica. The copper pyrites yields about 32 per cent. of pure metal. But the great riches of the mine appear to consist, from Dr. Francfort's analysis—confirmed by its analogy with the nickel mines of Varallo—in the existence of nickel in large quantities, combined with the magnetic iron pyrites which has hitherto been thrown away as valueless. His analysis of the ore has given a result of from 2 to 8 per cent. of this most valuable metal, the use of which has of late years become so extensive in various art manufactures, especially in the now very important one of alloys for electro-plating.

The lode is intersected by a deep ravine, on either side of which it crops out, thus rendering its working most easy, by means of level galleries driven into the face of it. There

are two facts worth noticing in connection with it: one is the abundant presence of copper ore in syenitic rock, contrary to all analogy with the Cornish, and most other known copper mines; the other is the occurrence of nickel in such large quantities with pyrrhotine or magnetic pyrites, a compound which constitutes so large a portion of most of those remarkable bodies known as aërolites, or meteoric stones.

Nickel is also found in the same combination in the mines of Varallo, as will be hereafter noticed, and it is now well known that magnetic pyrites when it occurs in horneblende rocks is always more or less nickeliferous, the instances of which are too numerous to mention. Dr. Francfort was the first to point out that this was the case in the mines of Migiandone, and an enormous quantity of what had hitherto been treated as waste is now likely in time to prove most profitable ore. Another mine of a similar character at Nibio, exactly opposite Migiandone, belongs to the same company, but is less rich and too difficult of access to be worth working at present.

Beyond Migiandone we once more stepped on to a diligence road, the first time for long; and a very short experience of it quickly wearied us. Nothing can be more monotonous to the mountain pedestrian than the dead evenness of the lower Simplon route, with its never-ending granite stumps and side ditches, only enlivened by the tree frogs croaking in loud, hoarse discord.

At noon we reached Ornavasso, where our portress left us, and we managed to obtain some hard bread and a bottle of "birra gazeuse" to supplement our meagre breakfast. Near Ornavasso, at Calmatta, is a quarry of white marble tinged with rosy and yellow veins, belonging to the cathedral of Pavia, which was in great part constructed of it. On the opposite side of the valley, at Candoglia, is another mass of marble above the left bank of the Tosa, nearly two hundred feet in thickness, and of great beauty and variety, especially the finest kind, which is white tinged with rose, from the

presence of manganese. This quarry, which, like that of Calmatta, has the great advantage of the close proximity of the Tosa for water-carriage by the Lago Maggiore, was granted by one of the Viscontis of Milan for the use of the cathedral of that city. From it came the glistening marble which has furnished the thousands of clustered pinnacles and statues of the gorgeous Duomo of Milan;—one of the most elaborate, and yet to my mind incongruous, of all the Christian temples of Italy; awkwardly as its rich Gothic details are engrafted on, or compelled to follow, the Lombard model,—a discordant effect, not diminished by the misplaced Roman façade of Pellegrini and the Ricchini.

The singular granite mass of Monte Orfano, on the left below Ornavasso, is very appropriately so named from its remarkable isolation, standing aloof from all the other mountains of the district, washed on two sides by the deep bend of the Tosa before it joins the Lago Maggiore, and on the other by the little lake of Mergozzo. The granite of which it is composed is white and of excellent quality, and is extensively worked. From it were quarried the forty-two columns, two of them of colossal size, for the restoration of the magnificent basilica of "San Paolo fuori le Mure" at Rome, nearly destroyed by fire in 1824.

The lakelet of Mergozzo, which is about two miles long by one broad, is a singularly secluded spot, shut in by mountains, and in former times was a noted haunt of smugglers.

We left the Simplon route at Gravellona, close by the Lago Maggiore, whither a day's direct journey would bring one from the icy regions of Monte Rosa, down to the orange and citron groves, flowering aloes, Indian fig, olives, pomegranates, and tropical plants of the sunny Borromean islands, mirrored on the glittering bosom of the deep blue lake. But our hearts were still in the mountains; the Val Strona and the Val Mastalone were as yet unexplored by us, and

by them it was our intention to reach Varallo in the Val Sesia, from Omegna, at the foot of the Lago d'Orta.

We were soon so thoroughly weary of the dull unelastic tramping along the high road from Migiandone in the close heat of the fiery sun, untempered by mountain breezes to cool us, or crystal streams to quench our thirst, that we were heartily glad to reach the little town of Omegna. Dusty and travelworn, we arrived most unpretendingly, all on foot, and Mora piled with a heterogeneous collection of strange baggage, skins, and horns; and, indeed, until we got down to the towns of the plain and more polished life, we were hardly conscious how rough and wayfaring was our guise. No supercilious waiter, however, came to survey us and report our "quality" relatively to our entertainment; and the kind people took an interest in the "signora," quite regardless of her having demeaned herself by walking, which would at once have made me blind to all deficiencies or discomforts, had there been any, as some fastidious travellers have ventured to assert.

At what seemed to us a sumptuous repast, appeared the head and shoulders of a splendid lake trout, deep-shouldered and of the proportions of a salmon of some 15 lbs.; moreover, very pink-fleshed, and in excellent condition; and at first, in my admiration of the fish, I almost forgot to eat it. The Lago d'Orta abounds in these noble trout, which afford an abundant supply of food, and also first-rate sport to the angler, especially with the artificial minnow. There are many other species of excellent fresh-water fish in the lake, and among them quantities of fine eels, which are caught at certain seasons in immense numbers, in grated well-traps constructed in the streams leading from the lake to its outlet—the Negoglia river, which is quickly lost in the Strona.

We spent the evening on the grassy brink of the calm, placid lake, which reflected the bright villas of Omegna

reposing on its edge, and the more distant and richly-wooded hills, studded here and there with a clustered hamlet of white houses, with its little spire; while over the breathless glassy bosom of the blue water, gondolas glided to and fro; and the sounds of merry voices and snatches of song, or the sudden splash of a rising trout, alone broke the soothing stillness of twilight. The memory of former days spent on the same lovely lake, and undimmed by time, was a link between the past and present, which found an echo in many grateful feelings.

As we returned at dusk through the street leading from the water's edge, we fell in with a procession returning from administering extreme unction to a dying penitent. The host, carried under a canopy, was followed by a line of torch-bearers and surpliced choristers, the priests robed in purple and white. Entering the church, all kneeled, while a psalm was chanted and the benediction pronounced amid a cloud of incense, when they dispersed, and the church, with its heavy-curtained doors still open, was left to the sacristan and the solitary lamp which shed its dim light over the altar.

The singular practice of exposing the skulls of "kith and kin" in wire-grated recesses, as noticed in the more remote Vals of Sermenta, Anzasca, and elsewhere, in which places we had attributed it to transalpine custom, was, to our surprise, carried out here, and with a disregard to all ideas of decency or respect for the sacred relics of mortality which was most revolting. Not only were the bleached crania of past generations ranged in grinning rows, each carefully labelled with a white paper ticket affixed to the top of the head, stating name, age, and style of the deceased, but the graves seemed to have been ransacked, and the ghastly heads wrenched from the half-decomposed bodies before the mortal coil had resolved itself into its parent dust. That this is no exaggeration, it is simply enough to say that at least two or three skulls, enclosed in glass cases, with the

half-dried flesh and integuments still clinging to them, and from the labels evidently of persons of superior rank, bore dates of sepulture between 1846 and 1850.

On making inquiries immediately on our arrival at Omegna, as to the route up the Val Strona and over to Rimella, we were told that the path was destroyed in so many places by the recent tremendous floods that it was utterly impassable, several mules having been obliged to return that day. Delapierre, like ourselves, was not easily stopped by mere reports when once determined on accomplishing any particular route, and, while we took our evening stroll, he started off to see what could be done, and convey a request from us to the Syndic that the path might be cleared as quickly as possible, not forgetting to state that a lady was one of the party.

On our return we found that the request had been immediately and most courteously attended to, and, by the joint exertions of the Syndic and curé, gangs of workmen were sent up into the mountains, and set to work to make temporary repairs of the route all the way to Campello, so that we might pass. Next morning, at nine, a message was sent to say that the track would probably be passable by noon, and we started forthwith.

Leaving Omegna by an old ruined gateway, loopholed, and grooved for a portcullis, and flanked by the remains of ancient fortifications, we soon entered a close and richly wooded dell clothed with a profusion of ferns; the Strona, now brimful, pouring impetuously down at the bottom of the narrow gorge. The road rapidly mounted high above the torrent, and the mountains on either side of the Val, covered with thickets of low deciduous trees and copse-wood, were glowing with the most vivid autumn tints conceivable, of every shade, from the brightest yellow to the deepest red. The ferns were in the greatest abundance and beauty, and many of them, though common in more northern climes, we

had not met with before in the Italian valleys; such as *Asp. adiantum-nigrum*, *Blechnum boreale*, and the noble *Osmunda regalis*,—which grew splendidly in some of the thickets I penetrated, its fronds more than 6 feet high. The bracken (*Pteris aquilina*), though generally uncommon on this side of the Alps, was also especially abundant and luxuriant; beside which were the mountain-loving *A. oreopteris* and *Grammitis ceterach*, only very sparingly observed hitherto.

There were no grain crops of any kind, and for the greatest part of the lower valley, not a space for pasture even, upon the richly wooded mountain rocks. The road, where it was not damaged by the furious torrents, was the very best mountain path we had seen anywhere, well engineered, covered smoothly with gravel instead of the usual rocky rugged tracks, trying alike to mule and pedestrian; and with the glades and copse-wood scenery which fringed it, was more like a drive through a mountain park. This appearance was greatly increased by the quantities of indigenous box and laurel which abounded, and also hawthorn bushes which most unexpectedly greeted our eyes. The great height at which the path was carried afforded commanding views from reach to reach of the sinuous valley; and though the tremendous rains had rendered it dangerous and difficult, yet this was amply compensated for by the beauty of the numerous cascades which streaked the steep mountains, sparkling in the sunshine from every rift and gully. The inmost reach of each successive bend of the winding road was crossed by one of these roaring torrents, tumbling down among the overarching, autumn-tinted copse-wood; the rocks and banks fringed with the brightest green mosses and ferns, glittering with spray drops, while the pretty pink flowers of the *Cyclamen Europæum* peeped coquettishly out from among them.

Insignificant streamlets now formed thundering torrents, and the destruction caused to the road was proportionate.

An hour before it would have been utterly impassable; but thanks to the Syndic, the gangs at work had cleared away narrow openings through the barriers of débris and gravel, or scarped a slender ledge high on the face of some giddy precipitous slope, just wide enough to pass along, though affording most precarious footing. In some places the path had been entirely washed away, leaving only the deeply furrowed course of the torrent cutting it right across; in others, avalanches of hundreds of tons of loose earth and entire trees were deposited like a steep barricade, round which a scrambling track had been hastily scratched. The risks were not small, and some of the most dangerous places were nervous work for E. and Mora; but in time all happily got past the worst part, and the upper path was comparatively little injured.

Passing under the high-perched village of Loreglia, the white campanile and houses of which, glittering on the mountain side, were a charming object from the valley, we descended suddenly and rapidly down to Strona, a mere hamlet. In the little self-styled "albergo" we found the owner at home. He accosted me in rapid succession in three or four languages without waiting for any answer, and we soon found he had resided in Germany, Switzerland, France, Belgium, and elsewhere; was a man of the world, and, what was much less common, a man in the Val Strona; for we had as yet met with none but women,—who, by the way, were endowed with a cool curiosity and questioning faculties perfectly marvellous.

Ascending as rapidly from Strona, the path again left the valley at a great depth below on our left; and near Inaggio, from a projecting angle carried round the rocks, we had a glorious view into it, and of a singular-looking little hamlet called Sambughetto, huddled together on a green slope at the entrance of a narrow side glen. The mountains, which had gradually become barer as we advanced, were now sparingly

clothed with but a few stunted trees; and we therefore were the more surprised to find Inaggio beautifully embosomed among terraced gardens, with tall cypresses, luxuriant plants and flowers, and fine trees of the noble *Paulownia imperialis* with clusters of ripe seeds; while the festooned vines showed a good crop, and the vintage was then in progress.

The houses were remarkably good and highly decorated, as, indeed, was generally the case in this fine valley. An unusual and effective feature too, for a mountain village, was a high alcoved fountain of rough rock-work, overhung with various plants and weeping trees; and the whole place showed evidences of a wealth and taste which one would never have expected to find here, but are the fruits of the industry of the natives, who after years of labour in foreign lands return to build villas and spend the rest of their lives among their own mountains.

So greatly was the road injured between this and the next village, Forno, that it took us two full hours, and we had often to wait while the gangs at work made a temporary track for Mora. We thus had leisure to examine a singular barrier or "serra," erected across the torrent, consisting of a huge dam constructed of cross timbers, the interstices filled with vast masses of stones, and faced next the opposing stream with closely-fitted boarding, in which were several doors. A flood-gate in the centre generally permitted the passage of the waters until a sufficient mass of timber was accumulated in the mountains and sold to the merchants below, when, after a heavy rain, the dam being closed up, the water rises until there is volume enough on its being re-opened to float the timber down stream to the Lago Maggiore, and thence in "caricas" to Milan. There are two of these singular constructions on this torrent, one above Forno, not long since erected at an expense of 25,000 ff., and this one, now old and out of repair, but which I was told had [illegible] 70,000ff. A number of workmen were

actively employed near it, squaring and preparing timber and planking.

A pull up a steep zigzag took us into Forno, where our portress from Omegna was to leave us, and Delapierre found great difficulty in replacing her, though a crowd of the wondering women of Forno surrounded us as we rested at the corner of the street. We had wished to cross the mountain to Rimella that day, but no one would undertake to carry the extra baggage over the Col di Campello; moreover, the mists began to settle down, and appeared threatening, so we determined to go on as far as Campello, and see how time and weather served us there.

At length, and for the first time, we found a man who undertook to be porter so far, but neither he nor any other of the men we tried afterwards could carry anything like the weight a woman could for a long distance. We had met one with a live calf some weeks old slung in the basket on her back, which she had then carried eight miles, and had much further to go; and at the mines of Varallo I was assured that 150 lbs. was the average weight of ore which they took as a load, up and down the mountains, in the same way.

By the rough pathway outside Forno I came upon an old stone wall covered with splendid masses of *Asp. germanicum*; and while I was at work selecting specimens and roots, I heard a loud rumbling like distant thunder, slowly increasing to a tremendous and continuous roar, coming from somewhere down the valley. Looking in that direction, to my amazement the entire side of one of the loftiest mountains seemed, as it were, slipping bodily downwards from its summit in an enormous mass, descending with increasing velocity, and tearing through the forests of beech and pine, overwhelming every obstacle in its course. It was a grand sight to witness the moving avalanche of thousands of tons of rock and débris, sweeping all before it, while the larger rocks bounded down as pioneers, their last leaps carrying them over the

torrent high up the other side. The path we had been traversing but half an hour before must have been entirely overwhelmed, and we had had a most providential escape. The landslip was the effect of the late rains.

The valley above Forno was one of the most beautiful autumn scenes that imagination could picture. The beeches were magnificent, and their broad masses of foliage, now of brilliant hues of orange and yellow, contrasted marvellously with the massive and deep dark pines (*P. picea*) with which they were intermingled up to the rocky points of the conical mountains. From Piano a smooth causeway continued nearly to Campello, under the shade of a wood of these splendid beeches, with an undergrowth of brackens and ferns, which was like a park scene. It is forbidden, under heavy penalties, to cut down any of these trees, which are a protection against the numerous winter and spring avalanches, and hence they attain such an unusual size and beauty.

Campello was half-enveloped in the now descending clouds when we came in sight of its few but remarkably large houses, and by a high and most rickety wooden bridge crossed the torrent, Mora with some risk, as the crazy structure evidently would not outlive the winter unless renewed. The village was deserted, not a soul to be seen; but at last, in a little narrow alley, we stumbled on a door with a crown daubed over it, and the words "Albergo della Corona;" but no one answered our repeated knocks, and, looking in through the grated windows, all appeared deserted and wretchedly cheerless. In hunting about for some inhabitant of this extraordinary group of houses, it seemed the wildest jumble conceivable. From one door we looked up at the foundations of a great ostentatious four-story house, with rows of green Venetian shutters, almost all the windows full of hay; and, close to it, down into the chimneys of another and the top stories of its neighbour. The street was only just wide enough for Mora with the baggage, while steep

back lanes, like an Edinburgh wynd, dived down into all sorts of impossible places, ending nowhere; yet, after all, there were only some twenty-five or thirty houses, and the whole valley to build in.

Our search for a single human being was vain: not a door could be forced, and we sat an hour or two, waiting patiently in hopes of some one turning up, till the drenching clouds settled down and drifted steamily between the houses, chilling us with their raw dampness. At length, when we had nearly given up hope, a sharp-featured and witch-like old woman, whose nose and chin nearly met, suddenly appeared, and was no little astonished, and apparently far from pleased, at our unexpected appearance. After some parley, she grumblingly led us into the house, which was cheerless enough, and, after some persuasion, she lighted us a fire in the rusty stove in the close-smelling room, the boards of which were thick with dirt, and the narrow-latticed windows barely admitted the misty light. We set to work to make the best of it, and Delapierre, who had collected sundry vegetables "en route," of course commenced at once with the Scotch broth. Even with this resource, when we sat down to supper, after having seen the filthy kitchen, cooking utensils, and personal habits of our hostess, we felt the full force of the practical counsel of the curé of Alagna in reference to similar quarters,—"premunirvi cioè del potente stimolo della fame, e chiudere gli occhi sulle sordidezze della cucina, e sugli stomachevoli gozzi degli albergatori; al che potete aggiungere un buon temperamento, stomaco a tutta prova, e l' uso del viaggiare."

The well-filled vasculum afforded full occupation for ourselves; for the Val Strona—as also, by the way, the Val Mastalone, which we descended next day—was the richest in ferns of any we had yet passed through.

In the evening, after Delapierre's savoury mess had been discussed, the two solitary old women who occupied the house

in the almost perpetual absence of their husbands, came and seated themselves by us; one with a distaff, the other with her hands folded and arms set in a decided manner, which showed she was fully resolved on a regular night's gossip. And most thoroughly they both carried out their intention; the room was a perfect Babel of chatting and laughter until a very late hour; the two old ladies screaming at the top of their voices by way of making their Italian patois more intelligible, Delapierre having to interpret odd words or phrases which were strange to us, and coming in like ourselves for an unmerciful cross-examination. Their inquisitiveness was insatiable, like all the women of the Val; and it was impossible to evade it altogether; but soon finding that to it was added an amusingly overweening idea of their own importance, their ancient family, and the high honour of having relations actually living at Turin, we gave them a very puzzling account of ourselves, though we merely answered their questions literally, and they were soon involved in utter mystery as to who and what we were, what were our objects, and how they should treat us.

They told us they always spent their winter evenings in this way, the women gathering from the different houses, and sitting together spinning and talking until the small hours. If the two tongues which had been going so ceaselessly and inexorably all that evening were fair samples of the glibness and vivacity of the rest, I should be indeed sorry to form one of their coteries. Still they managed to spin a good deal somehow, and manufactured their own linen, and also all their own napery, the latter not over abundant, nor, I must confess, over nice, except the dinner napkins,—a luxury we never found deficient in the meanest house in any of the Italian Vals, however bare of all other comforts or necessaries.

Our sleeping-room had been well brushed and ventilated under Delapierre's active care; but it was so utterly saturated

with a frowsy and corpse-like odour that it was almost insupportable. My researches when we got away to rest from our loquacious hostesses, traced it partly to a press, huddled with unutterably old wearing apparel, with dried fish and skins on the top of it; but Sancho's advice was before me, and I most carefully abstained from stirring it. E. begged me to light a pipe, and when I had filled the room with the more fragrant fumes of light Italian tobacco we forgot the "very ancient and fish-like smell" and fell asleep; our bed-head encircled with gaudy tinselled and mirror-framed saints, and a tawdry shrine of the Virgin at the side, with a holy-water stoup of rude "majolica." By early daylight the jumbled mêlée of every kind of old dirty fusty article was indescribable, the air had a sickening heaviness, and altogether I never remember such an uninviting dormitory as that of these proud dames of Campello.

We were never more glad to get under way than on the following morning, when with unmistakable alacrity all started punctually at six as agreed on; after settling the demands of our hostess, who only seemed in fear lest she should not ask enough. The morning was lovely and the fresh mountain air doubly sweet and exhilarating after our night's quarters. A workman who was going over the Col to Rinnella acted as porter, although very inefficiently; and from Mora's load, and the steepness of the ascent, E. climbed most of it on foot. Immediately behind the village, the hill sides were regularly fortified with embankments and earth-works, against the avalanches which would otherwise overwhelm it; as has more than once been the case. The effect of them was very singular. We shortly took to a succession of steep grassy mountains, and had to make so great a détour for the mule, that after climbing two hours we were only a direct half-hour's walk above Campello.

The grass-covered mountain, though steep, afforded pleasant footing up to the higher rocky crest; and a group

of châlets half way up was the centre of this Alpine pasture-ground. In the higher region beyond, we came on wide slopes of rhododendron, where, for the first time in Piedmont, we found the rare Club-moss *Lycopodium annotinum*, growing profusely among them, and crowded with its upright spikes of fructification. The shepherds regularly used it, crammed into the open bottom of a wooden vessel, for straining milk; for which purpose, they said, it was as good as any sieve. The Fir Club-moss, *L. selago*, was also unusually plentiful, as well as the little *L. selaginoides*; and a diligent search on the rocks near the summit was rewarded by finding a profusion of *L. alpinum*, which I had hitherto searched for on all the mountain passes, but in vain. Flowers had long been rare even on the highest ridges, and of winged insects we had for some time ceased to see any, the season being so far advanced.

My botanical wanderings had kept me in rear, and when I next looked up towards the Col the rest of the party had disappeared over it. Hastening up after them, I found E. seated a short distance below the other side of the summit, wrapt in admiration of a magnificent scene which suddenly burst upon us, and as glorious as it was unexpected. We had not anticipated any especial view, and our delight was the greater when we beheld before us the entire and majestic range of all the peaks of Monte Rosa,* from the Vincent Pyramide to the Nord End, uprearing themselves in the deep blue heavens with a grace and grandeur indescribable. We were at a height of probably 6000 feet, and from this lofty elevation looked over a sea of mountain tops and ridges beneath us, divided by deep, dark, and barren-looking valleys, above the highest of which stretched the basement of the glittering ice-crest of the Queen of the Alps; the whole of the huge and utterly inaccessible face rising proudly from it, covered with a continuous sheet of snow after the

* Vide frontispiece.

late heavy fall, and now shining with dazzling virgin purity in the morning sun. It was a spectacle never to be forgotten, and Delapierre was hardly less enthusiastic than ourselves. The only one of the nine summits not fully seen was the minor elevation of the Balmenhorn, lying a little in rear, its top barely appearing.

Below, and in front of the Nord End, rose the Pizzo Bianco, glazed over with the smoothest rounded coating of pure snow; and, now reduced to its proper level and strangely altered in form, appearing more like a huge stack than the beautiful peak it presents at Macugnaga. The snowy chain, dividing the head of the Val Sesia from that of the Val Macugnaga, lay to the south of this; while the latter Val was shut out from our view by the extended ridge we had crossed by the Col d'Egua, and along which rose the lofty, bare peaks of the Cima d'Egua, Pizzo del Moro, Cima del Russe, and others. Below the Vincent Pyramide, and to the left, were the noble pyramids of the Val Sesia, the Cima del Mond, Taglia Ferro, and Monte Carnera. Behind them was our former pass, the Col d'Ollen, and the Weisshorn or Grauhaupt, vividly reminding us, as well as Delapierre, of the Val de Lys and Gressoney. To the south, far below our feet, lay a wide ravine, its recesses bathed in a deep violet hue, and through this was our way down to Rimella in the Val Mastalone.

The only drawback was the icy keenness of the wind, which was such that I had the greatest difficulty in handling my brush while taking a coloured sketch of Monte Rosa, for which the party halted an hour or two. They, however, had the advantage of a sheltered, sunny hollow at a little distance, and I looked down every now and then, with some envy, at the trio, as they sat enjoying the sun's warmth; while Mora was cropping the short grass where they had spread out their plaids.

Starting once more, we descended by very steep grassy

slopes, the lower mountain sides clothed with orange-coloured brackens, and their bare tops, especially in the distant vistas, suffused with varying shades of purple, brown, and violet. On the Alpine pastures the large purple monkshood, the tall spikes of which grew in profusion, was the only plant in flower. The first habitations we came down on were German châlets, most uniquely placed, in scattered groups, up and down the sides of a vast sloping green amphitheatre; with clumps of fine beech and ash trees, the former glowing with autumn tints, but the latter looking strangely bald and dismantled, all the small branches of foliage having been stripped off, as usual, and dried for winter fodder. It was altogether a bright and happy-looking spot, and entirely different from anything we had yet seen.

Without halting, we dropped rapidly down towards Rimella, the gorge narrowing and now clothed with trees. On the opposite side, near S. Gottardo, our guide pointed out a few old stone huts, which he stated to be the ancient habitations of the first settlers in this Val. Under a sunny rock close to the path, and on the green turf at its base, were grouped a number of little wooden crosses, the wayside memorials of accidental deaths: collected, as our guide told us, from all parts of the valley, and deposited here to preserve them. How many a sad tale did these simple memorials silently record! The avalanche, the treacherous precipice, the landslip, the flood, and the snow-drift, each had their victims noted here, showing, lovely as the descent on this romantic valley seemed, what perils were linked with its elements of beauty. On the rocks not far below this, and over which trickled the tiny threads of a fairy spring, I was delighted to discover a profusion of the beautiful and rare *Woodsia hyperborea* growing in the greatest luxuriance. Probably no botanist had ever seen this exquisite patch before; and unless again accidentally hit upon, it may be long [illegible] uty gladdens the eyes of another observer.

From here we soon descended on Rimella: the scenery of the converging valleys, above which it is perched, assuming a most singular and charming aspect, and of which there is a noble view from the platform top of the steep declivity, where stands the bright-looking German village and its church. At one of the neat houses, a primitive shop for general stores and wine, we found entertainment; and Delapierre's first greeting in their German patois at once established a freemasonry, which insured us a hearty welcome and the best they could set before us. We were nearly famished, and could have devoured much worse food than the quickly-prepared omelette; as it was then 2 P.M., and we had tasted nothing that day but some rye-bread at the top of the Col. A group of Rimella folk afterwards gathered round Delapierre in the kitchen, to hear our adventures and destination; and, leaving them to their gossip, we betook ourselves to the churchyard close by.

The church itself, an astonishingly fine and large one for the remote situation, with handsome altars and some curious frescoes by native artists, stands on a wide open square, with stone seats round it; the gathering-place of the population of the various German hamlets of Rimella on the Sundays and high festivals. The view from it was beautiful, and the character of the mountains of the Val Mastalone extremely novel and striking; huge buttress-like masses projecting from them down into the deep gorge, towards which they all converged; and terminating in lofty cone-like summits, clothed nearly up to their jagged tops with mixed pine, beech, and other trees. One summit, to the left of Rimella, was a most conspicuous and beautiful object, an iron cross standing on its craggy point, which it must have been no easy feat to have planted there. This peculiar feature of pinnacled and conical mountain, with their rich and varied colouring of natural rock and deep forest foliage, completely distinguished the Val Mastalone from all others we had seen; though it is impossible in mere verbal description to

give any adequate idea of the characteristic individuality of each of these Vals, entirely distinct as they are to the most casual observer passing from one to another. A grand view is said to be obtainable from the Hubal, a saddle-shaped hill half an hour above the village. In the mountain range to the north, and shutting in the Val Mastalone from the Val Anzasca, a nick was pointed out to us, called the Col di Rochetta, a pass by which Ponte Grande may be reached direct from Rimella, though not accessible for mules; the distance being according to report about seven "stunden."

The Rimella dialect has been already alluded to, and needs no further remark; except that, though the language may be the most corrupt spoken in the German colonies, the characteristic neatness, bright cheery dwellings, and other general evidences of prosperous thrift, showed that in no other respects had the people of Rimella degenerated from the virtues of their Teutonic ancestors, or fallen behind their kinsmen of the other Vals. If anything, indeed, there was a greater degree of refinement and civilization here than we had seen in any of the others; one instance of which was a most creditable little Museum, consisting of various interesting curiosities and objects of natural history and art, neatly arranged in a special building: an institution, the proud importance of possessing which, in this world-remote region, may be imagined.

The costume of the women was distinct, and strikingly handsome, as were their beautiful countenances and fine full figures. The blue open jacket, like an Albanian's, showed a red waistcoat, or low boddice, with gilt buttons, confining a white linen shirt fringed with lace. The short kilt-like petticoat, reaching only to the knees, was also of blue, with a broad stripe of red, or alternate stripes of green and red cloth, round the hem; completed by loose blue cloth trowsers, confined at the ankle, and handsomely embroidered at the bottom; their feet were stockingless, but their l

sandals, or rather shoes without heels, were fastened with blue latchets. All wore a scarlet or blue kerchief knotted behind the head as usual, from under which, and the braids of their hair, hung gold earrings, generally massive circular ones. Amongst some of the women a fashion prevailed—which we had also seen once or twice before, as at Borca—of fastening an upper skirt or apron above the bosom and round under the arms, producing a more singular than pleasing effect, and quite outdoing our grandmothers' short waists. But those were exceptions, and the painter or the sculptor would find in these upper Vals some of the most charming studies of unsophisticated natural beauty and modest dignity, to be met with in Europe.

We were so well pleased with Rimella that we had almost resolved to stay the night and see more of it; but, on hearing that four hours would take us down to Varallo, the lower part of the descent being represented as an excellent new road, we determined, after some consultation, to push on through the Val Mastalone. At three we set off, and at first descended rapidly by a very steep track, occasionally by rude steps hewn out of the mountain, and down rugged ground; which I found trying work, as by this time my boots, which at Scopello had seemed likely to last to Varallo, had been patched, soled, and nailed again and again, until they would bear no more, being almost cut to shreds; and I anticipated with some fear the not improbable chance of their coming to pieces before we could reach our destination. Indeed, as I did my best to stride on regardless of the pain from cut and blistered feet in their now bursting envelopes, I felt that the chance was a certainty if the rest of the road were no better than this part of it.

Fortunately for myself, and E. also, who was on foot the whole way from the Col, the track improved when we got down to the torrent which flowed through the narrow glen. The scenery was most exquisite, delighting us at every turn

with its constantly varying features. We were shut in, side by side with the torrent, at the bottom of a deep, narrow mountain rift, the course of which was so sinuous that each reach seemed the last, so completely was all egress concealed by the walls of high rocks. At the bottom was hardly room even for grass, except just on the rocky brink of the now swollen burn, foaming among big granite blocks; while the trickling streams poured down the overhanging precipices among a host of ferns, sedums, and rock-loving plants; overtopped by the romantic sugar-loaf mountains already alluded to as so characteristic of this Val.

Our branch of the Mastalone torrent was joined lower down by another descending from Fobello, the route to which turned off at a wooden bridge. I had gone on in advance, as usual, to gain time for examining anything worthy of especial notice, when, on turning one of the many angles of the Val, I was met by a man coming up, accompanied by a peasant girl, whose salutations I returned in my best patois. To my utter surprise the first question in reply was, as to how the "signora" had got down from the Col d'Egua to Ponte Grande, and what we had been doing since then. He was evidently so well acquainted with our movements, and as to who I was, though the rest of our party were not in sight, that I felt very considerably puzzled, until I found on further conversation that he had seen us at Carcofaro, and was also the master of the shepherd who had so opportunely extricated us from our perils on the Col d'Egua. It appeared that he had heard of our adventures in many places, and it was evident from what he said that they had created no little interest along our course. The others soon came up, and were equally surprised with myself at the rencontre, and we had a very amusing chat together before he bade us farewell on his way to Fobello, and over into the Val Anzasca, by a pass which joins that of the Col d'Egua at the châlets of Baranca, and thence to Ponte Grande by the route we had descended.

Fobello itself is a very remarkable community, its inhabitants and those of Cervato being quite distinct from any of their neighbours. In the costume of the women, and their mode of braiding their hair, there is a marked difference; and also, what is not a little singular, they always carry their burdens on their heads, instead of on their shoulders, as is the almost universal custom in all the other Vals. There is not, that I am aware of, any trace or tradition of Teutonic origin among them, as indeed they assert themselves; and all my observations tended more and more to confirm me in the impression, that, independently of the German colonists, the inhabitants of a great number of these upper Vals, and especially on the western side of the Col d'Ollen, as the Val Anzascans for example, are evidently, both from their habits and physique, of a decidedly different race from the people of the lower Vals and plains; evidencing as distinct origin as the Celts and Cymri of our own mountain districts. As to this origin, though I have my own opinions, I should hesitate to express them before making myself much more intimately acquainted with the people themselves, their characteristics, and especially their dialects; besides which the tangled web of the ancient history of the tribes of these districts yet requires much elucidation, if indeed it can ever be hoped for. We intended to return from Varallo to visit this interesting corner of the world, and were very hospitably invited by one of the principal inhabitants to go and stay with him; but circumstances afterwards unfortunately prevented our doing so, and we had to leave it unexplored, to our great regret.

Descending through the same exquisitely romantic scenery, for some distance below the junction of the two streams from Rimella and Fobello, we came on a gang of men who were blasting the rocks and making a new road up the Val M talone; and on reaching the first little village, Ferran found the "strada carozzabile," of which we had bee

and the descent was thenceforth easy, as long as the road continued good. This road was the praiseworthy result of the private enterprise of five communities of the upper Val Mastalone—Rimella, Fobello, Cervato, Cravagliana, and Sabbia; and we understood that, from the point where their road ended, a continuation of it was about being made down to Varallo, at the expense of the latter commune. I went into one of the houses at Ferrara, where a group was sitting on the floor round a blazing fire in the centre, roasting chesnuts, the acrid fumes of the wood-smoke nearly blinding me, and in answer to my inquiries they told me it was only two or three hours to Varallo; on the strength of which, though it was now dusk and night rapidly coming on, we urged Mora forwards, and hastened our own steps.

The road for a mile or two was excellent; and though it soon became dark, the outlines of the noble mountains and bold rocks on either side of us, as we skirted the Mastalone torrent, had a grand effect; dimly lighted up by the stars which spangled the narrow arch of heaven overhead, where Jupiter shone with almost more than his wonted lustre. In this way we were proceeding steadily down when we were brought to a sudden stand-still.

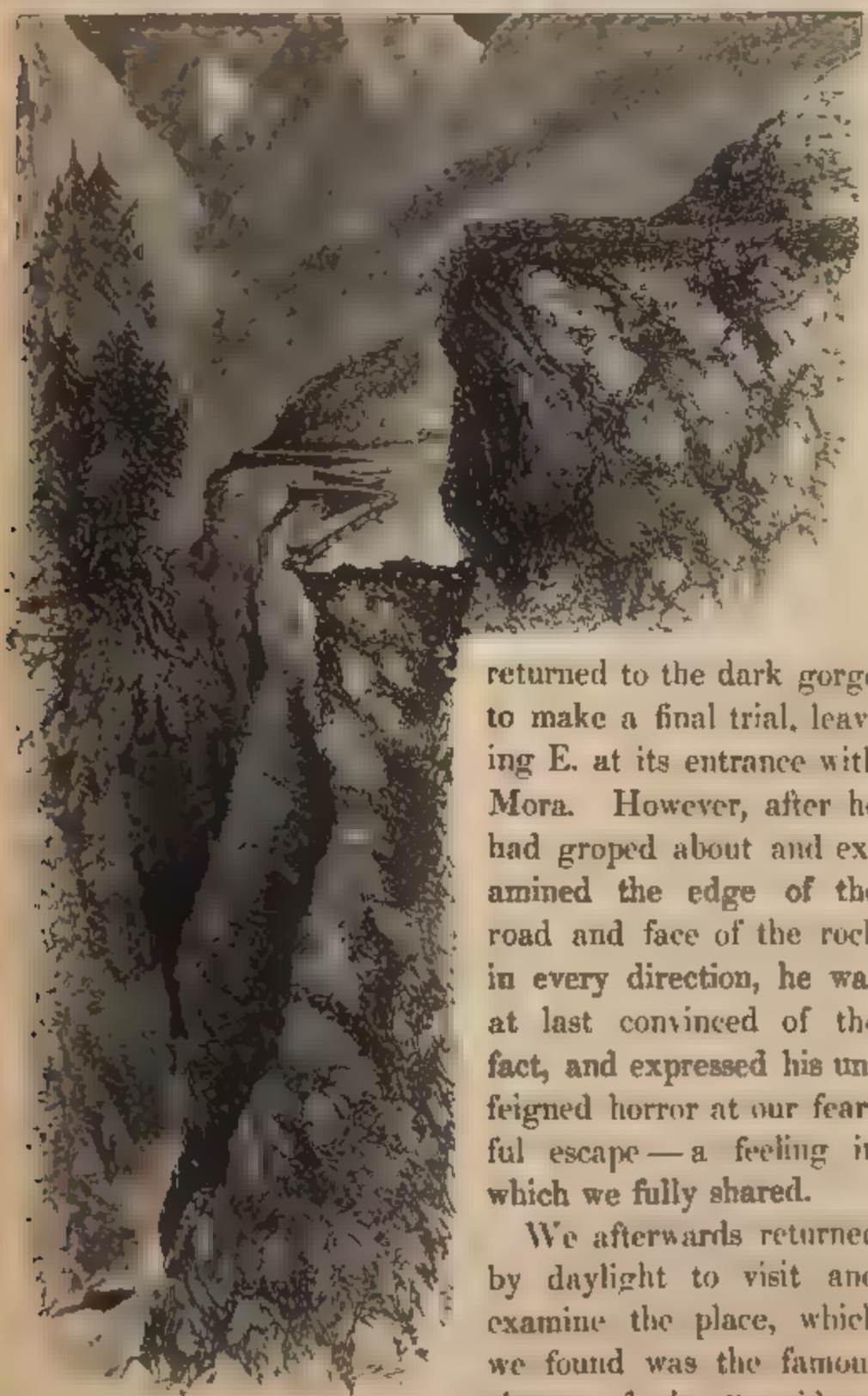
The road, which here overhung the torrent at a considerable height, was completely destroyed and overwhelmed by steep piles of rock, rubbish, and soil; just as had been the case in the Val Strona the day before, and evidently from the same cause. With some difficulty, and at no little peril, E. managed to scramble up it, and down to the road on the other side; but the risk for Mora was still greater, as the huge masses of sliding débris and rock fragments were readily set in motion, and might easily have shot down with any of us into the roaring but invisible torrent underneath. This occurred again and again, and caused much trouble and delay as well as [illegible]iety, for the darkness prevented our seeing many [illegible] magnified all the dangers caused

by the destruction of the road,—in some places by the furious torrents, and by the avalanches of stones which buried it in others.

At length the mountains receded a little on our side the torrent; the chief perils seemed past; and leaving Delapierre to extricate Mora from some minor difficulties, E. and I walked on for half an hour, considerably in advance. But again the mountains closed in, and seemed to imprison us; the road entered a deep dark gorge, shut in by huge overwhelming rocks; and the torrent, which had dropped gradually deeper and deeper below us, at this point entered the rift at so awful a depth that the sound of its rushing waters was lost. At first the darkness was almost palpable, and the damp raw feeling was like that of a cavern. A low parapet of large stones just kept us from stepping over the edge, and, heaving some of them over, they plunged into the abyss, thundering down on the sides of the narrow chasm; though the sound of the last plunge never reached our ears, as if lost in a bottomless well.

Keeping E. on my left, under the rock, for safety, I groped along by the parapet, with the help of my alpenstock, and the once more friendly light of Jupiter, which shone dimly down into the narrow rift; when, just in time to save us, my alpenstock suddenly met no footing, and, shouting hurriedly to E. to stop! we paused on the very brink of an abyss into which one step more would have hurled us headlong. Still it seemed hardly possible that the road, well beaten and without a single obstruction to the very edge, could end thus suddenly; and we groped cautiously about for some little time, trying whether there were not some narrow pathway round the shoulder of the rock, and as we afterwards found to our imminent peril; but it was soon evident that it stopped at the edge of the precipice. E. was anxious to make further trial, imagining there must be some track, but, now knowing the peril, I determined to turn back and confer with

Delapierre. When, after some time, we met him, he would not believe that we had not made a mistake, and we all



returned to the dark gorge to make a final trial, leaving E. at its entrance with Mora. However, after he had groped about and examined the edge of the road and face of the rock in every direction, he was at last convinced of the fact, and expressed his unfeigned horror at our fearful escape — a feeling in which we fully shared.

We afterwards returned by daylight to visit and examine the place, which we found was the famous chasm of the "orrido e

meraviglioso Ponte della Gula," as a local guide calls it; and celebrated as one of the greatest wonders of the country, both for the majestic grandeur of its scenery, and the awe-inspiring situation in which the old crazy bridge is built. It crossed the chasm a little below the place where we had happily stopped, and the old path to it was over the top of the rock round which we had in vain sought for a ledge. Up to this point the new road had been brought, and from it in continuation a new and safer bridge was intended to have been thrown across the chasm; but operations had been suspended for that year, and the brink of the unfinished road, from which the arch was to spring, was left unguarded, even by a single rail or pole, to warn the unwitting traveller of the frightful grave yawning below.

Neither of us had ever felt the slightest flinching of our nerves on the giddiest ledge, mountain-top, or glacier ridge; but when we looked in the morning light down into the horrid abyss, with its dark damp sides, and the gloomy sluggish pool below, and at the abrupt edge of the unfinished path on the opposite cliff on which we had unconsciously stood the night before, we shuddered as we thought of the frightful fate we had so narrowly escaped; and felt, almost with the vividness of reality, what would have been the sensations of the instant of falling, as one's body struck from side to side of the chasm before plunging into the hopeless pool at the bottom of the gulf. We were more thankful than ever to the Almighty Providence which had watched over us, and, by means so apparently slight as the pale rays of the planet, had mercifully preserved us from so horrible a fate; one which in a misty or clouded night must in all human probability have been inevitable. Jupiter also was linked henceforth, in our grateful recollections, with the Gula as well as with the descent of the Fenêtre de Cogne.

We had to turn back for some distance up the Val before we found the point where the old track turned off to the left,

and led up the mountain side and over the rocks above the Gula; dropping down again on the outlet of the chasm, where a slender bridge, but just wide enough for Mora, and with scarce any remains of the ruined parapet, led us over to the other side. Here the Val opened out, and seemed comparatively bright after the dark prison-like gorge; and by starlight we could distinguish the foaming waters of the Mastalone at a vast depth below, as they plunged in a furious cataract from the dread cavern, growling angrily as if impatient of their gloomy silent captivity.

From this point we hoped our difficulties were really at an end; but we were quickly undeceived, for we found that the new road from here was only in course of construction, and crossing the old track again and again, often taking its line, rendered progress most dangerous and almost impossible. Huge fragments of blasted rock, mounds of soil, unfinished embankments, piles of stones, planks, barrows, &c., every few hundred yards, obstructed the path. In many places the old road was cut through by roughly quarried pits many yards deep; and, dark as it was, it was a miracle that none of us broke any bones in attempting to grope our way along some miles of this kind of descent. Sometimes we found ourselves in the fields, and had difficulty in regaining the track at a practicable point; but Delapierre and myself pioneering, we managed to lighten some of the difficulties of E.'s weary way, and made slow but gradual progress. My boots had long given way, as I had feared they would, with the rough work so unexpectedly thrown on them; and my feet, which had burst through, were now bleeding and severely cut, causing no small pain when I had time to think of it, or stumbled on unusually rough footing. How Mora got on was better known to Delapierre than ourselves, as he kept with her, and we were often widely separated; but every now and then we forgot our own work, to watch, or rather listen to, the clever way in which she scrambled up and down, and in and out.

Once we all fairly gave her up. A lofty stone embankment wall had been constructed, intended to be filled with rubbish between it and the rock, to raise the road. This was only partially done, up to a point from which Mora, in a moment when Delapierre was looking out for a means of getting her down it, took to the wall; and to his consternation was in a few minutes distinguishable against the sky, at a height of some fifteen feet above our heads, scrambling along the narrow wall with the raging torrent on the other side, and the dark pitfall on ours. If the wall were, as we fully expected, unfinished at the other end, there was no possibility of her turning or backing, and we looked upon her and our baggage as hopelessly lost. Delapierre shouted frantically above the noise of the torrent, "Oh Mora! Mora! vous êtes perdu!" but Mora tripped unheedingly along, until she came to the unfinished end as we had anticipated. It was a moment of trying suspense, but she coolly put down her nose, paused for a moment, and then to our astonishment stepped down the edge of the rough stone courses—which most fortunately were gradually ended—until she reached "terra firma" once more, where Delapierre very carefully kept her for the rest of the way.

It seemed a weary distance to Varallo, short as it had been represented to us, and at times we almost despaired of reaching it: but the road ultimately became a little more finished, the trees and foliage overhead grew thicker along the route, and at length, by a narrow lane between vineyard-walls, we entered Varallo itself, a few lights on a lofty eminence above it showing the site of the famous Sacro Monte. Delapierre was now at home, threading his way among the narrow streets, while I followed with E., limping along with as much alacrity as my lacerated feet permitted. It was evidently late at night, for there were few people stirring, and scarce a light to be seen, except a dim lamp burning here and there before a Madonna at some street-

corner. At the other end of the town we at last walked into the square, galleried, inn-yard of the excellent Albergo d'Italia, where lights were quickly brought out to our help, and the ready hostess came to welcome us. Our baggage, forwarded from Ivrea, and two months' letters, awaited us, bringing nothing but good news; and, after a night of perils and difficulties we shall never forget, nor I trust cease to be grateful for our preservation from, we found thorough comfort and well-earned repose in the rooms we had occupied on our former visit many years before; and where we had first projected the tour of the southern valleys of Monte Rosa, that night happily completed.

CHAPTER XX.

VAL SESIA.—LAGO D'ORTA.—LAGO MAGGIORE.—VAL D'OSSOLA.

Varallo: situation—Romagnano—Val Sesian artists—Gaudenzio Ferrari: his masters, works, and scholars—Church of San Gaudenzio—Ferrari's house—Santa Maria delle Grazie—San Pietro il Martire—Gula—Farewell to Delapierre and Mora—Sacro Monte: its history and chapels—Scuola di Barolo—Mines of Balma—Start from Varallo—Col di Colma—Last view of Monte Rosa—Lago d'Orta—San Giulio—Orta—Sacro Monte—Monte Monterone—Baveno—Fish and fishing—Granite quarries—Islands of the Lago Maggiore—Domo d'Ossola.

THE first view that met our eyes from the windows next morning was that of the well-remembered "Holy Mountain," immediately before us, clothed with chesnut forests now exquisitely tinted; on its summit the three wooden crosses representing the Calvary; and, a little lower down, the clustered shrines and buildings of the "Nuova Gerusalemme," the wide-spread fame of which over Piedmont, Lombardy, and more distant Catholic countries, has, for now three centuries, given Varallo a name and an importance which has attracted thousands of visitors annually; and but for which it would have remained to this day an isolated mountain town.

Though Varallo is the capital of the Val Sesia, the market to which its produce is brought, and whence the wants of its population are chiefly supplied, it has but one high road by which it is accessible to the outer world; all the other inlets being either mere mountain tracks, or ending in them at no great distance. Buried in a deep but sunny basin of rich foliage-covered steeps, it is shut in on every side from the surrounding provinces of Aosta, Ossola, Orta,

Novara, Vercelli, and Biella, by lofty mountain ridges; except at one point, where the course of the Sesia connects it with the plains of Novara by a road flanking the river. By this way the principal traffic of Varallo is carried on, and branch roads from Biella, and from Arona on the Lago Maggiore, join it at Romagnano—a quaint little Italian town of old galleried and frescoed houses, and a locality which will always be regarded with special interest, as the scene of the last battle and the death of Pierre de Taille, the immortal Chevalier de Bayard.

By the bridge between Romagnano and Gattinara, which commanded the passage of the Sesia, the French army under the command of Bonnivet, in the Milanese campaign of 1524, were effecting an important junction with a body of Swiss allies, when their rear was attacked by the forces of Charles V., led by the Constable de Bourbon, with, among others, the Prince of Orange and the Duke of Urbino,—the latter of whom has the credit of the masterly stratagem by which they inflicted such loss on the French rear, and had nearly defeated the object of their movement. Bonnivet being wounded, Bayard assumed the command, and shortly afterwards,—"whilst drawing off the rear-guard under the enemy's fire, a shot fractured his spine. Refusing to be carried from the spot, he had himself supported against a tree with his face to the foe, and continued to give his orders with composure: at length, feeling the hand of death upon him, he confessed himself to his faithful squire, kissing the hand-guard of his sword as a substitute for the cross. Thus fell, in his forty-ninth year, the flower of French chivalry, 'the fearless and irreproachable knight.'" *

The road from Romagnano enters the Val Sesia at the little village of Ara, passing Grignasco — famous for its excellent wines — Borgo Sesia, and Quarona; the scenery

* Dennistoun's 'Dukes of Urbino,' vol. ii. p. 410.

increasing in beauty every mile. To the traveller who penetrates these Vals, for the first time, from the plains of Piedmont, or the Italian lakes, the impression produced by its picturesque richness is most fascinating; especially when Varallo opens out at last, its ancient houses and bright villas, with their gardens and vineyards, and the loftily-perched temples of the Sacro Monte, embosomed in the hanging forests of magnificent Spanish chesnuts, which clothe the granite mountain rising above the deep bed of the Mastalone torrent and the Sesia; while the distant vistas of the Vals Sesia and Mastalone reveal tempting glimpses of their hidden beauties. The two roads in progress down these Vals, the one from the passes of the Col di Val Dobbia and Col d'Ollen, the other from the Col di Campello, have been fully described. The only other point of access of any importance is by the Col di Colma, a mule-track from the Lago d'Orta, of which more hereafter.

When we first visited Varallo it was comparatively little known to travellers; but we now found that of late years many more had frequented it, and its beautiful scenery and great attractions were becoming more generally and deservedly appreciated. Independently of its own picturesque situation, and its advantages as head-quarters for exploring the neighbouring Vals and their romantic scenery, the works which it possesses of the ancient and famous Val Sesian school of painters and modellers are most interesting. At the head of them stands first and foremost Gaudenzio Ferrari, whose original and masterly productions ought to be far more widely known and studied than they as yet are; and some of the finest of them are to be found in the churches and Sacro Monte of Varallo.

Born at Valduggia, in the lower Val Sesia, in the year 1484, his genius had the good fortune, not only to dawn among a remarkable race like the Val Sesians, whose hereditary and almost universal profession was that of art in the

various branches of painting, decoration, and modelling, where it would be at once perceived and fostered; but also to be developed at that brilliant epoch in the history of painting in Italy, when it reached its culminating point of grandeur, purity, and manifold originality; and in which appeared an extraordinary galaxy of artistic talent, such as the world has not seen before or since. Among his contemporaries were the mighty names of Michael Angelo, Leonardo da Vinci, Raphael, Correggio, Titian, Giorgione, and a long roll of others, of secondary fame in comparison, but who would have been giants in later days.

Deriving the principles of his art from the old Milanese school of painters, after an elementary instruction at Vercelli under Giovannone, he studied in the school of that marvellous and universal genius Leonardo da Vinci; of whose varied talents he appears to have had no small share, being said, besides his skill in painting, to have been an excellent modeller, architect, optician, natural philosopher, and poet. Subsequently he went to Perugia, to study under Perugino, where he formed a close acquaintance with Raphael, also a pupil of Perugino; who, attracted both by his artistic skill* and his personal worth, received him amongst his most intimate friends. Some years afterwards he followed Raphael to Rome, renewing their familiar friendship, and deriving strength and inspiration for fresh achievements; returning to Varallo in 1510. As Kugler says,† "together with this union of different influences, he had a peculiarly fantastic style of his own, which distinguishes him from his contemporaries; and although never quite free from mannerism, it was the source of

* While Raphael was painting the Entombment (now in the Borghese Palace at Rome), in the church of S. Francesco, in Perugia, he intrusted Gaudenzio Ferrari with the painting of the "Padre Eterno" on the tympanum, which has been generally attributed to Raphael himself. Lazzaro Ag. Cotta, Museo Novarese.

† Kugler's 'Handbook of Italian Painting,' edited by Sir C. Eastlake, book v. p. 290.

characteristic beauties." This "mannerism," which was one of the first symptoms of the incipient and rapid decay of Italian art, immediately following on the period of its full ripeness, is not, I think, nearly so prominent in the works of Gaudenzio Ferrari as in those of many of the followers of the great masters; and it is more than redeemed by the originality and freedom of conception, and the dignity and grandeur yet richness of composition, which characterize his pictures. His scholar Lomazzo, in his treatises on painting,* has ranked Ferrari among the seven greatest painters of the world.

That his works are not generally acknowledged and studied as they deserve, is doubtless in great measure owing to their limited local distribution; and even Vasari seems to have known little of them, and barely notices them.† Varallo itself, the capital of his native Val, but remote from the great cities of Italy, he delighted to adorn with some of the most laboured and comprehensive of his productions, both in fresco and modelling. Vercelli also is extremely rich in his works, especially the church of St. Cristoforo, and in the convent of San Paolo is a Last Supper after Leonardo da Vinci. Novara, Valduggia, Arona, Saronna, and Como, possess specimens; and Milan contains some very exquisite examples, as in the Brera, where is the beautiful and well-known history of Joachim and Anna, and also in the church of Sta. Maria delle Grazie; where he was engaged in painting a Last Supper, when he died, in 1550, leaving it unfinished. Beyond these places no considerable number of his works have extended, though he has been justly called "one of the most prolific painters of his time."

* Lomazzo, 'Trattata della Pittura,' 1584; 'Idea del Tempio della Pittura,' 1590.

† Lanzi says, "Ben potro aggiungere con dispiacere, che tant' uomo fu poco noto o poco accettato al Vasari, onde li oltremontani, che tutto il merito misurano dall' istoria, mal lo conoscono, e negli scritti loro lo hanno quasi involto nel silenzio."

Most, if not all, of his existing productions, however, have fortunately been carefully sought out and beautifully engraved at the instance of Bordiga of Milan,* who employed Pianazzi, an able artist, to copy and afterwards engrave them; and they form a collection of great interest.

Of Ferrari's followers the principal were Bernardino Lanini and Andrea Solario; neither of whom have, that I am aware of, left any of their works at Varallo, except perhaps a lunette by the latter at the Madonna di Loretto. Another of his scholars, of secondary merit, was G. Cæsare Luini, a Valsesian—carefully to be distinguished from his namesake Bernardo Luini of Milan, a contemporary artist of the highest excellence.

There can be no doubt that the works of Gaudenzio Ferrari at Varallo and in its vicinity, exercised a powerful influence on the local artists of the Val Sesia; which may be traced in so many of the older wayside oratories and church frescoes throughout North Piedmont, in almost every part of which, as at the present day, the Val Sesians were employed on these works. Amongst these painters, in the 17th century, are deserving of mention the three brothers called the "Tanzi d'Alagna," Melchiorre, Giovanni, and Enrico; the first of whom painted the remarkable fresco on the façade of the church of Riva. A host of other painters have left innumerable works in every part of these Vals; and especially in the Sacro Monte of Varallo, which the local guide-books contain ample descriptions of, but are far too multitudinous even to refer to here.

Our first day's leisure, after settling the many necessary arrangements of baggage, apparel, and sundry other matters attendant on reaching head-quarters, was devoted to refresh-

* 'Le Opere del Pittore e Plasticatore Gaudenzio Ferrari, dis. ed incis. da Silvestro Pianazzi, dirette e descritte da Gaudenzio Bordiga' Milano, 1835.

† Vide p. 381.

ing our remembrance of Gaudenzio's pictures in the churches of Varallo. A little beyond the Albergo d'Italia, on the opposite side, stands the parish church of St. Gaudenzio, at the top of a broad flight of steps, and over the high altar is one of his masterpieces; a work of wonderful power and beauty, small though it is,—an "Ancona" or altarpiece, painted in six compartments. The largest in the centre represents the Sposalizio of St. Catherine, of whose martyrdom Ferrari painted the grand picture now in the Brera of Milan. According to the highly poetic legend of the vision of St. Catherine, she was led in her dreams to the infant Saviour, who placed on her finger a ring as the sign of her spiritual espousal; which when she awoke she found was miraculously left on it. The grace and sweetness of expression of the Virgin and holy Infant, while St. John looks over her shoulder, and the serene and reverent look of St. Catherine as she receives the ring kneeling, are charming, suggesting at once the influence of Raphael; and it was doubtless painted after Ferrari's visit to Rome. The upper middle compartment is the Taking down from the Cross, the dead body of the Saviour borne by the Virgin and St. John; and, though the space only admits of these figures, the expression of the subject is perfect. In the four lateral compartments are St. John and St. Mark above, and San Gaudenzio and St. Peter below; all treated with great skill. Bordiga says that a pendant to the altarpiece was painted in "chiaro-oscuro," with the Nativity, Epiphany, the Presentation, and the four Doctors of the Church; which was afterwards removed to the gallery of Prince Belgiojoso at Milan. There is a union of richness and grace in this altarpiece which is most attractive; and at the same time it exhibits the peculiarities of Ferrari's style in a remarkable degree.

But we remembered that his chef-d'œuvre in this his second manner, and which had left the strongest impression on us, was in the church of Sta. Maria delle Grazie. Threading

our way through the narrow Italian streets, and past numerous shops for the sale of guide-books, holy-water stoups, and sundry other articles of pilgrim-traffic, to the other side of the town, we found ourselves in the Piazza Ferrari—a deserted-looking square at the foot of the Sacro Monte, deriving its name from the house of Gaudenzio, easily distinguished by the inscription outside and a bust of the master by Avondo.

The church of Sta. Maria delle Grazie, on one side of this square, is connected with a convent of "Minori Osservanti," or Minorites; and shortly after entering it we were joined by two of the monks, in the Franciscan habit—for they are one and the same order—of brown serge, with the short cape, hood hanging behind, and knotted hempen girdle. They were intelligent men, and, after some agreeable conversation, volunteered their services as "ciceroni."

In the time of Bernardino Caimo, who was head of the Minorites at Milan, and also the founder of the Sacro Monte at Varallo, this church seems to have been greatly enriched, and the talents of Gaudenzio Ferrari were called in to embellish it. When the convents were suppressed in 1810, the church was annexed to the parish, but restored to the Minorites after the general relaxation of government in favour of their order; and, as we were given to understand, it was still allowed to continue with them as an establishment for educational purposes.

Near to the door of the convent, and in the corridor, was pointed out to us a Pietà, painted by Gaudenzio at the age of fourteen, while a pupil of Giovannone of Vercelli; and is on that account most interesting, as giving such early proof of his talent.

Next in order of time are the frescoes with which he adorned the side chapel of Sta. Margarita, within the church; executed in 1507, after his return from the studio of Perugino. The subjects are the Circumcision, and Christ dis-

puting with the Doctors; but grievously injured by time, though enough remains to show their great excellence. In the former a young man of noble aspect is introduced as a stranger entering the Temple, and is not improbably, as was the custom of the times, one of the Scarognini family, for whom the chapel was painted. The vault is adorned with subjects in "chiaro-oscuro;" — the Annunciation; the Nativity; the Epiphany; the Flight into Egypt; and below them six of the Apostles, with the date "Gaudentius, anno 1507."

But the finest work of Gaudenzio in this church, and its great glory, is on the screen dividing the nave from the choir; a solid upper wall, presenting a space of about 34 feet by 26; and on the decoration of this otherwise heavy and cumbersome obstruction, the painter has lavished some of the richest and most finished of his creations. It is divided into twenty-one compartments, representing the "mysteries" or various events in the life of our Blessed Saviour, commencing with the Annunciation; followed by the Nativity; the Adoration of the Magi; the Flight into Egypt; the Baptism; the Resurrection of Lazarus; the Entry into Jerusalem; the Last Supper; Christ washing the Disciples' feet; the Agony in the Garden; the Betrayal; Christ before Herod; Christ before Pilate; the Scourging; Pilate washing his hands; Christ bearing his Cross; Calvary; the Taking down from the Cross; the Descent into Hell; the Resurrection; and, in the large central compartment, the Crucifixion, the most impressive and admirable of all, and considered by Bordiga as the original of all his other representations of the same subject. It is a marvellous composition, no less for its fertility of invention than for the depth of expression which breathes throughout it. The tranquil dignity and mournful resignation of the features of the expiring Saviour, the eyes just closing, and the noble head drooping over the shoulder, as if the agony were finished, remind one of Leonardo, in their

pure and exalted religious tone. The attitude of the Virgin, as, overcome with grief, she is supported by her companions, and also that of Mary Magdalene clasping the foot of the cross in agonized despair, are full of feeling; and the beautiful face of St. John is no less expressive, as, having received the last charge of his beloved Master, whose side the soldier has just pierced, he gazes upwards with mingled feelings of amazement and grief; absorbed in the contemplation of those wonderful events of the Passion, of which he afterwards "bare record" with the vivid reality of an eye-witness, and the pen of inspiration.

Yet, in some of the accessories, an original quaintness of manner, and caprice of execution, manifest themselves. The trappings of the soldiers' horses, which form conspicuous figures, and also their knightly armour and other details, are embossed in low relief, and gilt; which has a singular effect. Our Saviour is surrounded with angels, two of whom receive the blood as it gushes from the wounds, while two weep above the cross. The soul of the penitent thief is represented as a diminutive figure, borne, kneeling on a napkin in the arms of an angel, to heaven; while a demon, wreathed with twisted snakes instead of hair, fastening on the shoulders of the impenitent malefactor, waits for the moment of his soul passing from his body, to carry it off. But though these materialisms have a quaint and mediæval effect when scrutinized, the spirit of the whole composition prevents them obtruding disagreeably; and the impression conveyed is what was doubtless intended, namely, the symbolism, in material figures, of the spiritual world, invisible to the actors in the scene. Moreover in the same spirit, and also to embody the artist's complete identification with his subject, he has introduced himself and his friend and fellow-pupil, Pellegrino da Modena, in the foreground; in pilgrims' habits, with the cross keys and scallop-shells, staves in their hands, and Pellegrino with the broad hat slung over his shoulders. This guise is,

doubtless, intended to refer to Pellegrino's name,* and the same friends appear in the same habit in the "Crucifixion" of the Sacro Monte.

It is somewhat remarkable that the features of Gaudenzio, and especially the curled auburn beard and long hair, resemble so strongly those of the Saviour, as portrayed in some of the other compartments, only idealized; as, for instance, in those of the Washing the Apostles' feet, and the Agony in the Garden. The former is a beautiful composition, nobly grouped, the colouring most effective, and, whether the countenance be a likeness of Gaudenzio or not, the expression and action of the Saviour in his voluntary humiliation are divinely conceived. It would be tedious to enter here into the merits of more of these compartments; but it is worthy of remark that in the Last Supper the figures are disposed in an unusual manner at a square table, instead of the almost universally-adopted arrangement, well known through Leonardo da Vinci's "Cenacolo," and which it would have been supposed Ferrari would have followed. The space, no doubt, prevented this; but also on comparing it with the "Cenacolo," in the Loggie of the Vatican at Rome, executed by Giulio Romano, after Raphael's design, it will be seen that the idea is entirely taken from the latter, and the grouping and attitudes of most of the figures are almost identical. Judas, however, is placed by Ferrari near the Saviour; and St. John seems half sleeping in his lap—a position which, though singular and faulty, is exactly that of Giotto's "Cenacolo" in the Sta. Croce at Florence. This identity of design with Raphael is a circumstantial corroboration of Ferrari's having

* Bordiga calls this figure Tibaldi, evidently confounding Pellegrino da Modena with Pellegrino Tibaldi da Bologna; for the former, who was Gaud. Ferrari's contemporary and fellow-pupil, left Rome after Raphael's death, in 1520, and was killed at Modena not long after (1525); while Tibaldi went to Rome in 1547. Vasari speaks of the latter as only thirty-five years old at the time he wrote; and he was after that invited to Madrid by Philip II., where he designed the Escurial.

gone to Rome to prepare his studies for this great work under that master. But though fresh from companionship and art sympathy with him, it is evident here that Ferrari had not relinquished his own originality, nor forgotten the influence of his early studies under Leonardo.

In a medallion between the upper compartments and the roof, is appropriately introduced a fine head of Isaiah, the great prophet of the Messiah; and in the interspaces of the three arches, in the lower part of the wall, leading into the choir, beside St. Francis and St. Bernard, is the inscription in two parts—

> "1513 Gaudentius Ferrarius Vallis Siccidæ pinxit
> Hoc opus. Impensis Popl' Varalli ad X Gloriam"—

showing that, notwithstanding he had studied under some of the greatest artists of the period, he wished, after all, to be known as one of the school of his native Val Sesia.

We spent a long morning in studying and enjoying these noble specimens of his masterly genius; and perhaps relished them the more for their novelty and the perfect contrast of the dim solemnity of the old churches, with their frescoed chapels, decorated altars, and incense-laden atmosphere; after the rugged outlines of the wild mountains, their dazzling skies, and bracing breezes. It was well on in the afternoon when we left the Minorite fathers, and from the Piazza Ferrari crossed the fine old bridge which spans the deep Mastalone torrent; soon coming to the church of San Pietro il Martire, at the entrance of the Val Mastalone.

On the wall of it is a fresco by Gaudenzio, which we were curious to see; as, though much injured by time and exposure, it is of unusual interest, from the characteristic story of the painter's rapidity of execution which attaches to it. The subject, a rather rare one, is Sta. Petronilla, the alleged daughter of St. Peter. As Bordiga relates, Ferrari had agreed to paint this fresco ready for the approaching festival

of that saint. Day after day he repeated his promise that it should be ready, until the eve of the festa arrived, and nothing was done. When taunted with having broken his word, he merely replied, though late in the evening, that the day fixed was not yet arrived, and, if they would but have patience, the fresco should appear on the festa. When all were gone to rest, by the clear light of the moon he painted, on the wall facing the south, the figure of Sta. Petronilla, to the utter astonishment and delight of all, when it was discovered in the morning. It is now so indistinct that little can be seen; but even these remains show a skill and transparency which it seems marvellous that any one could have attained by moonlight alone.

A short hour's walk from here took us up the Val Mastalone, to see and get a hasty sketch of the Gula, the scene of our perilous night adventure. I had made a representation to the proper authorities at Varallo of the culpable negligence which had left it so perilously unguarded, and it was promptly attended to; the offending parties were reprimanded, and a barrier was ordered to be erected across the road, at the entrance of the gorge, to prevent the possibility of such a catastrophe as we had providentially escaped. As we traversed by daylight the new road on which some hundred labourers were employed, and saw what we had passed over in the dark, we were astonished that we had accomplished it safely, awkward as it was, even in broad day, to thread one's way through the chaos of obstructions of every kind.

Mora, who had now all but arrived at the end of her adventurous and arduous journey, required a day or two's rest before crossing the Col di Val Dobbia; for the gall brought on by her struggles over the Col d'Egua had never been entirely cured, breaking out from time to time after a hard day's work, in spite of all our care, and at last necessitated the cutting out of a portion of proud flesh; after which operation, and relieved of the baggage, she was able to proceed.

Delapierre gave up his accounts, prepared with his unfailing neatness and accuracy, and fixed the hour of his departure for Riva, where he was to sleep, and cross the Col di Val Dobbia next morning, home to Gressoney.

When it came to parting company, it was like bidding farewell to an old and tried friend. Thrown together as we had been, day after day, in the strangest variety of situations, we had never once found him fail in his careful attention to every wish, almost before expressed, or in his unvarying good temper and thoughtful contrivances for E.'s comfort; beside which, and what we perhaps valued more than anything, he was ever ready for any expedition that was proposed, no matter how doubtful, and his pluck and perseverance were thoroughly English. He had often told us, as we ate our frugal meal on the wild mountains, or settled down for the night in some out-of-the-world place or another, that he as thoroughly enjoyed the adventurous kind of life as we could possibly do; and I have no doubt that to a great extent such was really the case, for he entered heartily into everything that interested us, fitted in with our ways, and was always ready to help us to make the best of rough quarters, or any discomfort we encountered.

Mora, too, we had come to regard as an intelligent and companionable member of our little party; her feats had been events of no small importance in our daily progress, and, moreover, I felt no ordinary gratitude to her for the brave way in which she had carried E. in perfect safety, day after day, over many a dangerous path, where a less sure foot would have imperilled both. We had talked over many pleasant plans with Delapierre for a future season, when, if spared, we hoped again to visit Gressoney; and at last, with kind messages to our friends there, we wished him a hearty farewell, and watched Mora's steady, well-known gait, until both disappeared at the end of the narrow street.

We were now left to our own resources again, and I de-

termined to get rid of every possible encumbrance, and, reserving only the saddle-bags, to send our baggage forward by "poste" to Arona on the Lago Maggiore, and thence by the Simplon route to Gondo, on the frontier, to await our arrival. We remained some days longer at Varallo to make the necessary preparations, and arrange and pack our accumulated collections of plants, minerals, insects, horns, skins, and other matters—a work requiring some time and care. The botanical specimens had to be thoroughly looked over and diminished in bulk, by rejecting all needless duplicates, as even then they half filled one of the spare cases; and the hammer, in like manner, reduced the geological specimens to a more convenient weight and compass. A box was made for the horns of the bouquetins and chamois, and similar articles; and, for fear of any difficulty from the former being discovered or seized at the frontier, we had arranged so as to pass the whole through the "Dogana" ourselves, overtaking them at Gondo.

A quiet Sunday of complete repose refreshed and restored both mind and body; and we employed our leisure the following day in revisiting the Sacro Monte, the climb to which up the steep paved road, had, for the first day or two, in the lame state of my feet, suggested rather the idea of a work of penance than of pleasure, and which, as we were not pilgrims, I had shirked.

No situation could have been more happily chosen for the purpose intended, than the little mountain, rising, on the north of Varallo, to a height of about 270 feet, on which the chapels, oratories, and convents of that extraordinary creation, the "New Jerusalem," are grouped together. Beside the beauty of the site and its convenient proximity to a town, like Varallo, of some 3000 inhabitants, the character of the mountain is exactly adapted for the effective disposition of the various "stations" of which it consists; and on this account chiefly it was selected by the founder, the "Blessed Bernar-

dino Caimo." A Milanese of noble family, and Vicar of the Convent of the Minorities in Milan, and also in connection with that of Varallo, he was specially commissioned by Pope Sixtus IV. to visit the Sepulchre and other holy places in Palestine, and while there took the opportunity of making copies and drawings, with the intention of erecting a facsimile of them in his native country. On his return to Italy in 1491, after examining all the likely sites within reasonable distance of Milan, he found the conical hills of the Val Sesia the best adapted for his design, and fixed upon Varallo as the spot; being probably specially attracted to it from the fact of the convent and church of Sta. Maria delle Grazie, already described, having been conveyed through him to the "Minori Osservanti,"—as appears from a brief of Innocent VIII., dated Dec. 21, 1486.

The first stone was laid by Scarognini, a Milanese "magnifico," who cordially entered into the scheme; and at his expense the Holy Sepulchre was completed, and a hospice attached, where the founder and a number of Franciscan brothers came to reside in 1493. Caimo had planned a vast extension of this commencement, but died within three years, leaving his designs to be carried out by his successors. The fame of the "Santo Sepolcro di Varallo" quickly spread; visitors flocked to it in crowds; plenary indulgences were conceded to those who made a pilgrimage to it; and offerings poured in from all directions. One chapel was completed after another, and the visits of the good and justly sainted Archbishop of Milan, Carlo Borromeo, in 1578 and 1584, gave an additional impulse to their progress. His bed is still preserved there as one of the most sacred relics of the place. At his instance and expense the buildings were enclosed by a wall, and an arched gate erected, after the designs of Pellegrino Tibaldi, with the inscription—

"HÆC NOVA HYERUSALEM VITAM SUMMOSQUE LABORES,
ATQUE REDEMPTORIS SINGULA GESTA REFERT."

He also erected the first chapel at the entrance, the subject of which is the Creation, as an appropriate introduction to the history of the Redemption; and thenceforward the place was called the New Jerusalem.

Its celebrity was further increased by a royal visit in 1587, in the persons of Charles Emmanuel I. and his Queen, with their court; who contributed to the number of the chapels. Since then numerous other oratories have been added from time to time, until their number now amounts to forty-six. Each contains a group—in some very numerous—of figures modelled in terracotta, the size of life or larger; many of them of great merit as works of art, others very inferior and mere rubbish. The figures are coloured, and occasionally draped with appropriate clothing, the resemblance to life being heightened by the addition of human hair, and the effect is often very startling. Each chapel represents a different "mystery," and, beside the modelled figures, the walls are decorated with frescoes. The front of each is open to the air, all but a wire grating, through apertures in which the subject may be perfectly seen in the position intended by the designer. A labyrinth of walks leads from one to another, up and down endless steps, through wild gardens and open spaces; and to take the chapels in their right order, as numbered, almost requires the assistance of one of the numerous guides—a set of lazy mendicants and ragged children, who, of course, infest the place.

Among the more eminent artists who have designed and executed the details of the various oratories was Pellegrino Tibaldi, as architect; while Gaudenzio Ferrari, Fermo Stella, Giulio Luini, and the "Tanzi d'Alagna," followed by a host of Val Sesian painters and modellers of various degrees of merit, have furnished their adornments. The details of the works of these artists, and the subjects contained in the various oratories, are only interesting to the

traveller actually visiting the Sacro Monte; and the fullest particulars are to be found in the guide-books published in Italian, which abound at Varallo, the best of which is that of Bordiga, the collector and publisher of Ferrari's works, and therefore well qualified for the task. The works of Gaudenzio were those in which we were principally interested, and deserve a few passing, though necessarily brief, remarks.

His earliest work on the Sacro Monte is the Chapel of the Pietà, originally containing the group of Christ's bearing the cross; but the modelled figures have been removed, and others substituted. The frescoes on the wall are particularly interesting, as having been painted by him at the early age of nineteen; when his ambition to share in the glory and renown of the great work was gratified by this chapel being intrusted to him; a proof of his early talent, and the just appreciation of it. The frescoes are much injured, but of the chief one there is enough to show its excellence. On one side is St. John, with clasped hands, gazing upwards in grief, and the two Marys sorrowing, as a soldier in the centre seems to forbid their following further; his helmet embossed and gilt as in the instances in the Franciscan church, while the two thieves are led bound by a figure on horse-back.

In the Chapel of the Adoration of the Magi we have a work of higher merit, giving evidence of his studies under Raphael. The group of ten figures in terracotta represents the three kings, just arrived, with their immediate attendants; and alighting at the door of an inner recess, where a light burns over the manger of Bethlehem; and in which is a simple but exquisite group of St. Joseph, the Virgin and Child. On the walls of the chapel are painted in fresco, a crowd of followers, the varieties of whose costumes, attitudes, and figures are mos[illegible]erly portrayed. In modelling the horses, which for[illegible]tral group, Ferrari was assisted by his pupil [illegible]

But the greatest of all Gaudenzio's achievements is the large Chapel of the Crucifixion, a work of the most extraordinary character and masterly execution. His first design for the subject, on the screen of the Minorite church, he has here carried out in life-like figures in terracotta; twenty-six of which form the centre group, embodying the events of the Passion; while round the walls are depicted, with wonderful power, a crowd of spectators, numbering some 150, most of whom are gazing at the central figure of the Saviour on the cross. The variety of expression, costume, and character is almost infinite. Round the vaulted roof are twenty angels in the most varied and graceful attitudes, deserving of especial attention; and also a hideous figure of Lucifer.

Though this combination of terracotta and fresco may not be as highly esteemed in the present day as in the times when this extraordinary sanctuary sprang into existence, yet this composition must always be admired as one of the greatest of Ferrari's works, and undoubtedly that on which he lavished the full force of his genius and the collected studies and experience of his previous artist-life.

In the frescoes Gaudenzio and Pellegrino da Modena are again introduced side by side, as in the Crucifixion in the Minorite church, and probably as a memorial of their close friendship, for Pellegrino had died some few years previous to its execution. Charles V. and his suite also figure among the crowd of personages, he having been a great contributor to the expenses of this chapel. Over one of the side doors are two of the Scarognini family, who then held the office of "Fabbricieri" of the Sacro Monte. There have always been two of these officers, who are chosen from persons of the highest rank and station, the term of office lasting two years, one going out annually, and another being chosen in his stead. Among these "Fabbricieri" have for generations been numerous members of the noble families of the Scarog-

nini of Milan, and also of the Marquises of Adda, who have a palace at Varallo.

The last of Gaudenzio's frescoes on the Sacro Monte is the Chapel of San Francesco d'Assisi, where the first services were celebrated by the founders. There were formerly portraits here of Bernardino Caimo, and of many of the Scarognini family, by Gaudenzio, but they have unfortunately been effaced by time and painted over. The "real head" of Bernardino is, however, preserved in a niche just outside this chapel, with a Latin inscription. Within is a picture by Gaudenzio of St. Francis receiving the "stigmata;" the crucifix being borne suspended in the air, as the legend relates, by the six wings of a seraph; the hands, feet, and side of St. Francis represented as usual, connected by lines of light with the five wounds of Christ, which, when he woke from his vision, it is said, he found imprinted on his own body.

Among the remaining oratories, the stranger is sure to remark the lofty one of the Transfiguration, which contains a veritable mountain, on the top of it the figures of Christ, Moses, and Elias, modelled by Pietro Petera, a Val Sesian; the three disciples are near them, and at the bottom of the mount a number of other figures, amongst which is a startling one of the demoniac boy.

We found almost all the oratories greatly changed for the worse since our former visit. The buildings were falling into decay, the frescoes dimmed, and the figures assuming a tawdry, ragged appearance, especially in the groups of inferior merit, which suggested a diminished popular regard for these once cherished objects of superstitious veneration; and this was borne out by the offerings, for only here and there a few "quattrini" were to be seen on the floors within the grating, which we had before seen strewn thick with quantities of small coins thrown in by the pilgrims. Even on the "Santa Scala," built in imitation of [illegible] me,

notwithstanding the plenary indulgence granted by Pius VI. to any who should mount its flight of steps on their knees, repeating a Paternoster and an Ave on each, instead of the numbers of deluded devotees shuffling up in former days, we did not see one. There were, in truth, more visitors than anywhere else at the canteen at the entrance, where pipes, coffee, wine, and other stimulants are dispensed; and adjoining which is a shop for the sale of crucifixes, rosaries, and relics of all kinds, traditionally sanctified by touching the bed of San Carlo Borromeo.

It would have been a matter of wonder if the fame of the great Sacro Monte of Varallo had not originated imitations of it elsewhere, as was the case. Among the most important of these is that of the Madonna del Monte at Varese, between the lakes of Como and Maggiore; commenced in the beginning of the seventeenth century, and representing the fifteen mysteries of the "Holy Rosary," in the same manner as at Varallo. The figures, however, are fresher and better cared for, and are therefore generally much more pleasing. At Orta is also a Sacro Monte, the various chapels with their groups of terracotta figures representing the events in the life of S. Francesco d'Assisi. At Domo d'Ossola is a Calvary after the same fashion; and the idea has been carried out in numerous less important places, an instance of which is the convent and church of the Madonna del Sasso at Locarno, so exquisitely situated above the orange and lemon groves of the Lago Maggiore; where there is a Last Supper, the figures modelled the size of life, and along the sides of the steep climb which leads to the church are "stations," or small chapels, containing each a picture of one of the events of our Lord's sufferings on his way to Calvary. Others on the same or a smaller scale are frequent in North Italy.

But to return to Varallo. After the works of Gaudenzio Ferrari we enjoyed most the exquisite view from the Sacro

Monte; over the forest-girt town at the confluence of the Mastalone with the Sesia, whose sinuous folds wound over its pebbly bed, passing in the distance under the elegant bridge of Crevola; the oratories and white houses peeping here and there from the autumn-tinted woods; and vineyards and gardens lying on the sunny slopes, at the base of the mountains which rose in noble and varied contour to rugged points.

Descending the Sacro Monte to the Piazza Ferrari, and passing through the town, we paid a visit to the new school of design, founded by the Marchese di Barolo in 1831, under the title of the "Società d'Incoraggiamento allo Studio del Disegno." It occupies a large palazzo, and in a noble hall—with a gallery, the balustrades of which are beautifully carved—lists of the members of this praiseworthy incorporation were framed and hung up; and three marble busts decorated it,—of Gaudenzio Ferrari; the Marchese di Barolo, the founder; and the Canonico Sottile, the historian and benefactor of the Val Sesia. Attached to it is a "laboratorio" or school of wood-carving, under the superintendence of the society; and a number of artists were busily employed in spacious workshops copying from abundant and excellent models, or carrying out their own designs. The productions were sold for the benefit of the institution, or the artists themselves, and at, what we had long regarded as a myth, "prezzi fissi;" without abating one lire. Most of the carvings were excellent, and so very reasonable in price that we regretted we had no means of carrying more of them away with us than one pair of angels in the attitude of prayer, which we were unable to resist.

During our stay at Varallo we made the acquaintance of an intelligent and accomplished Englishman, whom we were surprised to find resident there, Mr. Montefiore, who was engaged in superintending operations at the great nickel-mine in the neighbourhood, then only recently commenced. The government inspector of mines, the Chevalier Melchiorri,

who had been twelve years at Cogne, happened to come over on a tour of inspection at the time, and it was arranged that we were all to visit the mines together, starting by sunrise. He was, however, obliged to attend to other business at Varallo, and our visit was delayed indefinitely, so that I had ultimately to content myself with the information which Mr. Montefiore kindly gave me.

The nickel-mines of La Balma are situated in a wild and lofty position on the Pic de Castello, at the remarkable height of 5200 feet above the level of the Sesia, and four hours and a half stiff walk from Varallo. The ore occurs in the syenitic rock in an immense segregated mass, like that at Migiandone; and great part of it quite pure, ramifying in various directions, with a width of about 40 feet and a height of 100, gradually tapering upwards. It is a combination of sulphurets of iron, nickel, and cobalt, and in more or less intimate admixture with sulphuret of copper. With the iron pyrites the other metals are contained, on an average, in the proportions of 7 per cent. of nickel, 2½ cobalt, 2½ copper. The ore, when extracted, is picked, and the refuse thrown down the mountain, the pure ore being dragged down in rough wooden sledges. One man drags 5 cwt., and remounts, carrying the sledge on his shoulder: he performs this journey twice a day, and his wages are 2 fr. 25 c. A furnace for roasting the ore had been erected at a point where the sledge road ceased, at a height of some 3000 feet above the Sesia. A second one was in course of erection, and steps were being taken, under the active superintendence of Mr. Montefiore, to erect smelting furnaces, with blast engines, hydraulic wheel, grinding mills, and wasting furnaces, near the village of La Rocca, a mile and a half from Varallo, with the Sesia as water power. The produce has been immense, and there is not, I believe, any nickel-mine known, so productive as that of La Balma, and its importance in connection with the electro-plate manufactories of Birmingham can hardly be overstated. The last

report that I have seen estimates the "matt," or reduced ore, as "yielding 58 per cent. of nickel and cobalt, copper 14 per cent., iron and sulphur 28. This 'matt' is shipped at present to Liège, where metallic nickel, pure oxyde of cobalt, and copper, are extracted from it. The enormous amount of 150 tons of metallic nickel has been obtained in the magnetic pyrites already raised from the mine, equal to nearly 100,000*l.* in value."

We were too early for the annual fair, at which the varied costumes of the people of the different Vals, that had so delighted us before, are seen to the greatest advantage; and we were also disappointed on the market day, as a drizzling rain from the previous evening prevented any large concourse, and those present were not in holiday costume. But it is one of the most charming and picturesque scenes on the day of the great fair, when along each side of the narrow Italian-looking streets a row of women stand, resting on their conical baskets, three or four feet deep; the point on the ground, and slung round in front from their shoulders by the strap with which they carry it; while on a cover on the top of it their various goods, butter, poultry, and vegetables, are displayed for sale, for which their own personal cleanliness, to say nothing of their beauty, ought to attract purchasers. We had now been long accustomed to their striking types of face and charming varieties of costume; but when we first saw them assembled here in crowds on a brilliant day, we were wonderfully struck; for there was something so Grecian in the contours of their finely-chiselled features, and in their picturesque dresses, that we felt as if suddenly introduced into a land of romance. Even the old women were extremely fine looking, retaining the traces of their early beauty, to which was added the dignity of age; and in carriage and manner they had suggested to us at the time the idea of well-born dames, who for some freak or [illegible] gone to market with their own produce.

The singular and elegant Comasque head-dress, which is so general among the Italian lakes, was not unfrequent at Varallo. The hair is artistically plaited behind into a broad knot, and some thirty or forty silver pins, like long skewers, with broad, ornamented, spoon-like heads, are thrust into it, disposed in a radiated form, like a coronet or rich "nimbus." A woman at Grignasco had once showed us how they accomplished it, and assured us they did each other's hair in this way every Saturday; but how they managed to sleep in them with any comfort, and avoid deranging them, we were at a loss to imagine.

Among the chief products of the Val Sesia are chesnuts, of which vast quantities are consumed by the natives in various forms; but one of the staple articles of food among the lower classes appeared to be potatoes, or "tartufi bianchi," as they are called; though under the same name are also known the white truffles, the Piedmontese species, which, as well as the black, are plentiful here; and we found them excellent, for our cuisine at the Albergo d'Italia was greatly indebted to them.

The neighbourhood of Varallo produces wine, though it is poor and thin; but the vineyards at the mouth of the Val Sesia, as Ghemme, Gattinara, and Grignasco, are famous for good sound wines, which have more or less of claret or Burgundy flavours; the price of the best about 2½ fr. the bottle. The vines here are grown in a manner entirely different from that of the Val d'Aosta, being trained up to high poles and stems of topped trees, more in the Lombardy fashion.

Tobacco was formerly allowed to be grown freely in the Val Sesia, though in the plains it is a government monopoly. The soil suited it, and the extra labour and care required in its cultivation could be easily spared where the proportion of tilled land is so limited. Being of an inferior quality, little was exported; but it sufficed for the use of the natives, to whom it was a great boon. However, the excise-officers tried

every means to deprive the Val Sesians of their privilege: representations were made to the king; and in spite of the strongest resistance on the part of the local authorities, they were at last obliged to submit to a compromise, giving up the growth of tobacco on condition of being furnished by government with what they consumed, at the cost price of their own produce. But, through the trickery of underlings, they are only supplied with the inferior qualities, and much discontent is felt at their being obliged to buy an adulterated foreign article, which they can grow pure on their own soil. Of fish there is but a small supply at Varallo, chiefly trout from the Sesia, though other kinds are occasionally brought over from the Lago d'Orta.

One article of manufacture considerably interested me, both from its novelty and odd appearance, in the shape of the sides of bellows roughly cut out of beechwood, each pair being sawn through all but the nozzle, which kept them together. They were neatly packed in mule-loads of four dozen each; and these oblong bundles lay in piles in the court-yard of our inn, ready to be carted to Turin and other towns, and quite amused me; for though one remembered that old Anacharsis has the credit, if Strabo be right, of having invented that useful implement, and the cry of "bellows to mend" is familiar enough; yet I had never had the remotest notion where they were made, nor ever heard of a bellows manufactory; so that this rudimentary stage of the article satisfactorily disposed of any ideas of spontaneous production.

The "Albergo d'Italia," where we were so comfortably accommodated, formed part of a large range of buildings, all originally one convent, now sequestrated, but where twelve Ursuline nuns formerly luxuriated in ample space, if in nothing else. Besides the inn, a number of private dwellings, factories, &c., have been made out of them; among which is an infant-school; and also a brewery, where was

made the excellent "birra gazeuse" we drank at table, which was coming into general use since the failure of the vintages.

As soon as the baggage was sent off, our few final preparations were quickly made, and we were ready to start for Orta by the easy pass of the Col di Colma. Evening showers had refreshed the parched vegetation; and, on a brilliant October morning, we left our pleasant quarters at Varallo, after a farewell look at the beautiful altarpiece of San Gaudenzio, while our woman guide was getting herself ready. There was not a mule to be had in Varallo, where donkeys seemed to take their place; but I had stipulated for a pony which was promised. When, however, it arrived at the door of the inn, long accustomed as we had been to Mora and her sturdy predecessors, we were literally startled at the animal, brought as the best to be had in all Varallo; a dwarfed, scraggy little quadruped, not worthy the name of pony; and whose slender carcase the flaps of the saddle enfolded like a great sandwich. Though we had reserved nothing but the saddle-bags and wraps, it was evidently so weak and unfit to carry both E. and them, that, finding no better mount obtainable for any consideration, she preferred walking over the Col.

Passing the church and burial-ground of S. Marco, we followed the road to Borgo Sesia for a short distance, catching a fine view of the Vincent Pyramide of Monte Rosa. Turning up a side track to the left, we entered an open forest of enormous spreading Spanish chesnuts and walnuts, just within which stood the wayside chapel of the Madonna di Loretto; beautifully situated, and all the walls, and the porticoes running round it, richly covered with frescoes by Gaudenzio and his scholars: the best of them, a Nativity, by the former; a beautiful work, the figures nearly the size of life.

We wound our way up through the huge forest trees,

which spread their branches far and wide over a carpet of the softest and finest grass; suddenly bursting on the grandest views, the snowy peaks of Monte Rosa, beautifully clear, in the distance, and the most brilliant sky overhead. A better road carried us along the brink of a ravine, at the foot of granite precipices, on the face of which grew exquisite sheets of the maiden-hair fern (*A. capillus Veneris*); every leaflet of its elegant fronds tipped with the crystal drops which trickled down from a spring high above. A rustic bridge crossed the torrent-bed, wide and stony, speaking of the fury of its winter floods, now shrunk to a tiny stream. Beyond we passed through the village of Civiasco; its highly ornamented houses, though not far from the Col, standing in luxuriant gardens; and in two hours from Varallo reached the summit.

Seating ourselves on one of the sunny knolls of heath and copsewood, which covered the highest point of the Col di Colma, and, picketing the pony, we spent an hour in gazing on the surpassingly beautiful scene spread below and around us; the bright and placid lakes of Orta, Maggiore, and Varese, embosomed among woody mountains; the plains of Lombardy, dotted with endless white towns and villages; and to the west, the grand mass of the Queen of the Alps, radiant in sunlight. It was our farewell to Monte Rosa, the Pennine Alps, and their valleys; for, after skimming over the lakes, our way lay across the great Alpine chain, by the glacier pass of the Gries, which, as it was getting late in the season, we were anxious to cross before the first snows of winter should render it impassable. We could not have been favoured with a more splendid day. As we enjoyed the balmy air, which wafted up the scent of the ripe leaves of the chesnut and walnut forests below, the recollection of the last time we had been seated on that same spot, talking of a future tour throug Monte Rosa, vividly recurred to us: t realization

of our scheme had surpassed our utmost expectations, and, at the same time, how much was still left unseen, how much worth seeing again and again, to tempt us, if spared, to future visits.

From the dazzling ice-peaks of that wondrous mass we turned to look on the exquisite view of the Lago d'Orta below us; its calm waters mirroring the deep azure sky; the glittering island of St. Giulio in the centre, with its cluster of bright buildings; and the autumn-tinted forests girdling the whole: while all were suffused with a transparent golden glaze, toned off into the blue, purple, and lilac-tinted ranges of the further distance. At length we bade adieu to Monte Rosa, and left the summit; descending through chesnut woods and ferny brakes — where *Osmunda regalis* grew nobly—and down romantic broken ground, aptly comparable to a wild, rich, park scene.

By a wayside spring I found two specimens of the true salamander, *Salamandra vulgaris*, recently killed; one of them an unusually fine and bright individual, measuring 8 or 9 inches in length; its jet black sides beautifully marked with bright orange yellow blotches; not confluent or forming stripes, as is the case in the variety *maculosa* found in Portugal; the Styrian variety *atra*, on the other hand, being quite black and without spots. From the prominences behind the head, containing the parotid gland, and from large lateral pores, it exudes a glutinous secretion, which might enable it to resist a woodman's fire long enough to allow it to crawl out; and from this no doubt its proverbial fire-proof reputation has been acquired.

As we came on the scattered châlets of Arola, the peasant women, in their picturesque dress, were filling huge mattresses with the fresh dry leaves of the Spanish chesnut, for bedding, as they raked them together and collected the chesnuts for food, with their usual frugality losing nothing available. Mountain lanes shaded with fruit and forest

trees, and continuous gardens, and vineyards with luxuriant gourds trailing everywhere, brought us down to Pella, on the borders of the lake; where the usual clamorous attempts at imposition on the part of the rival boatmen ended, of course, in their gladly taking us over to Orta, for half a franc each.

It was a novel and delightful feeling, after the rough mountains, to glide over the glassy surface of the lovely lake, and past "the hallowed isle of St. Giulio, now so sweetly slumbering on its bosom, but the scene of great events in olden times; the capital of a Lombard duchy, and the stronghold of a heroine queen, Gisla, the wife of Berengarius II., king of Italy; who there withstood all the might of the first Otho of Germany." * It is a most strikingly picturesque islet; its few acres of rock crowded with Italian houses, down to the water's edge. Its ancient church is rich in marbles and monuments; the antique pulpit of grotesquely carved black marble, on porphyry columns, is very remarkable; with the tomb in front of it of the traitorous Minulfo Duke of San Giulio in the sixth century; and among the relics is the skull of San Giulio himself, enshrined in silver, beneath which his remains repose.

Landing on the beach at Orta, we took up our abode for the night at the Albergo San Giulio, instead of at our old quarters at the Leone d'Oro; as Delapierre had given us so high a character of the improved state of the former, which experience fully justified. Nothing could be more excellent than its management under the young landlord, Ronchetti, who had taken the pains to learn English, which he spoke fluently; and his efforts to study the wishes of English travellers had met with deserved success. The hotel, which years before we had seen empty, was now only too crowded; and the lovely lake of Orta and its beautiful neighbourhood —not long since neglected and unknown—bade fair to

* Gallenga, History of Piedmont, vol. i. p. 7.

become one of the most favoured haunts of tourists and summer residents.

To the fisherman it offers especial attractions, the sport afforded by the lake being excellent; and, with the artificial bait, trout of immense weight are caught plentifully. A brother of the rod, from the west of Scotland, whom we met with, had had so great success that he had taken up his residence at Orta for the season, and his accounts of the sport were so tempting that it required some firmness to resist staying a few days. But we had heard reports of a heavy fall of snow, already, on the high Alps, and felt it imperative to hurry on, lest our intended passage of the Gries should be frustrated.

In the evening we walked up to the beautiful grounds of the Sacro Monte, a charming spot overlooking the lake; with cool walks and soft turfy glades, overshadowed by trees intermingled with evergreens; where, along the intersecting walks, stand chapels or oratories, to the number of twenty-two; containing, as before mentioned, groups of figures, chiefly in Franciscan habit, modelled like those at Varallo, in terracotta; and representing the principal events in the legendary life of San Francesco d'Assisi. Many of the chapels are handsome buildings, well cared for, and generally pleasing and interesting. The lake sweeps round behind the promontory on which the Sacro Monte stands, and all round the slopes of the deep bay are successive vineyards and gardens; which have doubtless given the town, and thence the lake, its name. The aloe, cactus, and other exotics, flourish along its shores, and skilful gardening might accomplish wonders, as shown by the slight attempts at some of the villas.

As we looked on the lake, from the parapet in front of the convent church crowning the Sacro Monte, a glorious burst of sunset glow lit up the enchanting scenes before us; flinging the most brilliant and fantastic lights and shades,

from burning crimson to the deepest indigo, over lake, mountain, and forest. The glowing waters beneath us reflected every outline of the islet of San Giulio; Pella, and many a dotted hamlet of white houses, stood out on the opposite slopes of purple-shaded forest; and, as we were drinking in the exquisite scene in the hushed stillness of evening, the pealing tones of the organ and the softened voices of choristers, mingled with the faint perfume of incense, reached us through the open doors of the convent church just behind us, where vespers were performing.

It was late in the evening before we returned to our host's, who had engaged to find us a guide and an ass—for neither mules nor ponies were to be had—to cross the Monte Monterone next morning to Baveno on the Lago Maggiore. We had once before been disappointed in our hopes of enjoying the grand view, said to be obtainable from the summit, of the lakes and Monte Rosa, and, after the glorious sunset, trusted we might be more fortunate on the morrow.

But a grey morning dawned on our early start; and as we ascended by the terraced roads rising behind Orta, the ashy clouds hung dark and lowering. Instead of lifting they gradually closed upon us, shutting out, first the distant mountains, and then the lake below; resolving themselves into dense drizzle, and ultimately into drenching rain. We passed through one or two considerable villages or mountain towns, and in about two hours reached a wide, heathy region, which we traversed for some time.

As we expected, the ass had broken down before we had ascended far; for instead of carrying E., it was just as much as we could do to get it along with what, after three months' experience, we had imagined to be extremely light baggage. The saddle was constantly turning round, for there was no substance in the lean-ribbed animal to strap it on to; and absurd mishaps occurred perpetu[illegible] baggage was upset, and everything not insi[illegible] wer,

and soaked through in the rain, which poured pitil ssly. Still in the dreary monotony of the mist, through which we could not see twenty yards, these accidents afforded us considerable amusement, especially at the expense of the muleteer, whose rueful expression of dismay and hopelessness at each catastrophe, until I came to his help, kept us in constant laughter. We ourselves were soon literally soaked to the skin, and dripping from every thread, as we had made up our minds to be. Our guide, too, fared no better, but was in a very different frame of mind, for he had been very anxious to turn back, hinting at the great risk and danger of losing our way over the mountains in the thick "nebbie." But I knew that we must come down on the Lago Maggiore somewhere, if we could only keep in an eastward course; and I would not hear of returning.

The summit of the Monte Monterone commands, I believe, a most extensive and magnificent panoramic view, from the Alps to the Appenines; with the lakes of Orta, Maggiore, Varese, Monate, and Comabbio, outspread on the vast and lovely district between; which stretches away to the plains of Piedmont and Lombardy, where Milan and other cities glitter in the far distance. But all that we could see from time to time along the desolate road, were occasional glimpses of rounded hills, with scattered heath and bracken; a wild rough surface of knolls of decomposed mica schist, full of imperfectly-formed garnets, from the size of a large nut downwards, greatly oxidized, and lying detached from the rock in handfuls. Beyond this all was blank.

Having groped our way to the summit, we began the descent, which was not so easy to find; and our guide now made a clean breast of his scanty experience of the pass, which, from his timidity, we had suspected from the first. Below a châlet where we halted to get a little rye-bread and milk, he got entirely out of his reckoning, and soon involved us in a deep swampy dingle, where the ass was

nearly permanently bogged, and from which we had some difficulty in returning. Still he was so goodnatured and delightfully ingenious in his excuses, that it was useless being angry with him. What regions we did pass through it is impossible to say, except that the tiresome descent led us over every variety of pathless swamp, hill, and morass; in all of which we were clearly far away from the right track, and lost some weary hours.

At length we reached the woods again, and, now that we were below the line of clouds, we saw at our feet a vast steaming cauldron, and at the bottom of it a grey glassy sheet like a sea in a fog, apparently some miles below us; its boundaries lost in vapour, but its reality evident by the dwarfed figure—a singularly strange sight to us from a mountain side—of a steamer crossing what we knew must be the Lago Maggiore. We luckily hit upon a steep, narrow track which led through shady chesnut woods and mountain meadows; until in nine hours from Orta we dropped down to the main road, where the waters of the lake rippled on its pebbly beach and the pattering rain hissed on its breathless surface.

A short walk took us to Baveno, where we were only too glad to be housed and change our drenched clothes. It was necessary to wait here until we could ascertain whether the baggage had been forwarded from Arona to Gondo. The following day was still wet; and leaving E to rest, I engaged an intelligent fisherman, Gaetano by name, and early in the morning started with him in his gondola. The "barcas" or "gondolas," which have often an iron beak like their Venetian namesakes, are, however, of a very different build, being heavy, clumsy boats, with a cover like a waggon-tilt; but they have the double advantage of being most commodious and also very picturesque [illegible] with their striped blue, red, and white awnings, the [illegible] the lake. With

my rod, tackle, provisions for the day, and a waterproof, I made myself very snug; and, though it was too late in the season for all other fish but trout, and rather too early for them, I had very fair sport, considering; while Gaetano was a most communicative companion and full of piscatorial anecdote, constantly verging on the marvellous.

I first tried the fly, but there was no breeze, and, putting on an artificial minnow, soon killed some fine perch, "pes' persic" in Gaetano's patois, and also a number of what he called "cavedan," like a large golden dace or a carp, new to me, and which may perhaps be the *Cyprinus capito*. Among the fish found in the lake, he enumerated the "loce" (lucio) or pike, "tinca" or tench, "barbo" or barbel, "carpione" or carp, "trota" or trout, the "botrisio" or burbot (a freshwater cod, which is also British, though little known); and, besides others, the names of which I could not make out, the "agone," the whitebait of the Italian lakes, and, like its congener of Blackwall fame, most delicious food, especially as eaten fresh from the lake, with a newly-gathered lemon from the gardens on its shores.

June and July were said to be the best months for fly-fishing. The "agoni" then rise most freely, and, though small, are so excellent that the sport is satisfactory as a diversion; perch, "cavedan," and other species also take the fly greedily, and afford a variety. But the best sport is with the great lake trout, which are said to run up to thirty pounds and more, and are chiefly taken in the winter.

The water being unusually high, I lost my spinning-tackle in some hidden weeds, when Gaetano asked leave to land at Feriolo, and quickly returned, producing, to my great surprise, a brace of neatly made artificial fish, cut out of a piece of bright soft metal, stamped with scale marks, capable of being twisted in any way when attached to the tackle, and spinning admirably. They had been introduced some few

years ago (by an Englishman, of course), and their wonderful success so astonished the fishermen that they immediately adopted them, and they quickly became universal. During the season, from the Isola Superiore, which is entirely inhabited by fishermen, sometimes as many as fifty boats a day go out, and with a similar bait, but of a much larger size, take immense numbers of trout, which are sent to Milan. The largest fish lie chiefly in the middle of the lake, and they fish with two lines, one deep, the other nearer the surface.

They also make their own silkworm gut, and I was fortunate in obtaining some hanks of it of first-rate quality. The silkworms, when they assume the transparent fleshy hue, just on commencing to spin, are put into vinegar for twenty-four hours, and on being taken out are dexterously broken at the middle by the fingers, when the sacs containing the viscous fluid which forms the silk are drawn out into even threads, stretched, and dried.

The weather cleared next day, and the lake, as we glided over it in the once more brilliant sunshine of early morning, appeared exquisitely fresh and lovely; its glittering islands sparkling on the deep blue waters, over which stole the soft chimes for matins. The towers of Pallanza, innumerable villages, and white villas, clustered on the shores or on the vine and olive-clad hills above; and high over the wild mountains which closed in the head of the lake, the cold peaks of the distant snow Alps contrasted with the warm glowing colouring of all else.

After fishing the little bay of Feriolo, we went ashore at the great granite quarries there, in the face of a low mountain abutting on the lake. The granite or "migliarolo," as it is locally termed, is of most beautiful appearance and excellent quality, like the Egyptian syenites, being of a compact lustrous grain, taking a high polish, and of a pale rosy red

colour—unlike that of Monte Orfano, just on the opposite bank of the Tosa, the felspar of which is pure white, while in the granite of Feriolo it is tinged with iron oxide. It seemed to work easily when fresh, and a variety of useful fixtures were carved out of it, among them cooking-ranges for charcoal fires, and I was told they stood fire well. In one block I found a large node imperfectly formed, in which the component parts of the granite felspar, mica, and quartz—were each grouped separately in a remarkable manner. In the neighbouring granite mountains, beautiful crystals of felspar are found, of large size, in oblique rhombic prisms of a delicate flesh colour, or sometimes white, and of which Gaetano brought me a quantity.

From Feriolo we pulled over, in the calm sunny afternoon, to the beautiful Borromean islands, touching first at the Isola dei Pescatori, a charmingly picturesque group of humble houses clustering round their little spire. On the beach the fishers' boats (the "barca" and the "caicco") were drawn up, and long lines of nets spread to dry; numerous groups of women were busy washing and singing in chorus at the brink of the lake, and the gondolas moored at the openings of the narrow streets forcibly reminded us of the islets of the Venetian lagoon.

The Isola Bella, in spite of the more than questionable taste of the fantastic terraces with which it is crowded, must always be interesting from the wonderful luxuriance of its tropical vegetation; and also for its stately though formal palace, and its connexion with the noble and historical family of the Borromeos. Among the pictures which adorn the palace are several of that wild and unhappy genius Peter Molyn, aptly named, from his tastes and passions, Tempesta, and whose foul and treacherous murder of his faithful but deserted wife Bianca is one of the darkest deeds on record. Passing along the spacious suite of halls, a sort of grotto

portal, deliciously shady and cool in the summer, the walls covered with green mosses and ferns, opens into the gardens, under the shade of a noble cypress; and not far off was growing a most singular pine, labelled "*Pinus Abies monocaulis.*" It consisted of but one stem, without a single lateral branch or any sign of one, and each year's growth distinctly marked. The gardener said it was from the mountains of Vicenza, and almost unique. Among the splendid exotic trees and plants which adorn the gardens, were the Sicilian palm, real trees of oleander, camellia, and metrosideros; the famous camphor-tree 40 feet high; with orange, lemon, and citron, pomegranate, aloes, and cacti in profusion.

But the Isola Madre is the gem of these lovely islets; more like some rich nook of Sicily, as one pulls under its overhanging rocks, studded with prickly pear, mesembryanthemums, strange-shaped echinocacti, yuccas, and luxuriant aloes whose lofty candelabra-like flowering stems tower into the air. Nor was the interior less charming. Groves of lofty evergreens shaded the winding walks; rare pines, cypresses, Brazilian araucarias, palms, and acacias, formed delightful glades, carpeted with the softest turf; trees of the Brugmansia perfumed the air with hundreds of their great bell-shaped blossoms, mixed with the scent of the luxuriant Mandevillia; and, as the sun declined, the strange sound of pheasants crowing, joined with that of the noisy tree-frogs. A solitary villa stands in the middle of it, plain in exterior, but sunny and Italian within; then uninhabited, except by the custode, and we longed to take up our abode in this delicious solitude.

Passing the tiny island of San Giovanni, on which the aloe flourishes with especial vigour, we landed on the promontory of Pallanza, and found our way to some nursery-gardens belonging to an Italian named Rovelli. He took

us round his grounds, which command fine views of each of the three great reaches of the lake. I had not expected to find such an admirable and valuable collection as was here grouped together. The pinetum comprised most of the new and rare kinds, many of them noble specimens. The *Cryptomeria Japonica* and *Cupressus torulosa*, side by side, looked, the former like a Chinese pagoda, the latter like the dome of an Indian mosque. The New Holland Eucalypti and Banksias were hardy as oaks. The scented olive perfumed the whole garden. A noble *Benthamia fragifera* 12 or 14 feet high was loaded with its beautiful red strawberry-looking fruit. Palms and stove-ferns seemed growing wild out of doors; and a deep dingle was a labyrinth of thousands of camellias, which, without any protection, bloom profusely from February to April. Rovelli had been in England for some years, and knew most of the great collections. He had good propagating houses, and altogether I was much gratified with the whole place and the intelligence of the owner. It was hardly possible to imagine that we were within a day's journey of the eternal snows and winter of Monte Rosa.

All our inquiries after our baggage were fruitless, and we determined to go on to Domo d'Ossola and institute a search there. After a farewell morning's fishing we took the "coupé" of the diligence as it passed at noon, and jingled along the Simplon route past Feriolo—where is an inn far preferable to that at Baveno—the mouth of the Tosa, Gravellona, and over the ground we had traversed from Ornavasso; glad to escape its tedium, and yet enjoy the really fine mountain scenery of the Val d'Ossola. Crossing the Tosa first at Migiandone and then above Vogogna, by ferry-boats, the bridge having been destroyed by the floods which have desolated the whole valley for miles, we had a fine view up the beautiful Val Anzasca—then in deep purple

shade—opening out of the lofty mountain walls which shut us in on either side.

A few miles beyond this brought us to Domo d'Ossola. Rumbling up its picturesque street of Lombardo-Italian houses, with their shady colonnades and awnings, we took up our quarters at the comfortable inn of the Ancienne Ville. The baggage had not been heard of, and our only chance left was, to send special messages back to Arona and Varallo, and wait the result.

CHAPTER XXI.

VAL D'OSSOLA. — VAL DI VEDRO. — VAL ANTIGORIO — VAL FORMAZZA.

Domo d'Ossola — Calvary — Prealia [illegible] Crevola — Ascent of Simplon
Prickly pear - Marble qua[illegible] — [illegible]amarine and garnets — Varzo
Gallery of Gondo — Douan[illegible] [illegible]aggage — Start for the Gries —
Bridge and battle of Crevola [illegible] of Val Antugrio — Ponte Maglia
— Baths of Crodo — Bacen[illegible] [illegible] — San Rocco — Granite moun-
tains — Gorge of Foppiano - [illegible] — Falls of Tosa — Gries glacier
— Snow-storm — Farewell to [illegible]. [illegible]leys.

DOMO D'OSSOLA, so called from its "duomo" or cathedral being the mother church of the district, is the capital of the Val d'Ossola and its tributary valleys, lying nearly in the centre of them. Local historians derive the name of Ossola from the Osci, a people asserted to be of Etrurian origin, who migrated here and founded the city of Oscela or Ossola. But though its situation is central, it is in other respects an unfortunate one; as the whole width of the valley is here subject to constant and furious inundations from the Bogna torrent, which have from time to time devastated the once fertile plains, overwhelming them with beds of boulders and drift. Its chief importance is derived from its being the common market where the Italians on one side, and the Swiss merchants from the other, meet to exchange their goods and transact business.

The Val d'Ossola is divided into two parts, the upper and lower; through which as a main artery runs the river Tosa or Toce, the Athisone or Atosone of the ancients. In its course from the upper Val it is augmented by the Anza from the Val Anzasca; the Ovesca from the Val Antrona; the Bogna from the Val Bugnanco; the Doveria from the Val di Vedro; and the Devera from the Val Devera, all on

the west: and on the east by the Isorno passing Monte Crestese; and the Melezza from the Val Vigezzo. Swelled by these tributaries, the Tosa rolls through the plains of the lower Val; until, as we have seen, it discharges its waters, shortly after joining the Strona, into the Lago Maggiore, at the foot of Monte Orfano.

In a scenic point of view the situation of Domo d'Ossola enchanted us, as we sat basking in the sun at the edge of a vineyard on the outskirts of the town, looking up the Val d'Ossola; the swift rapids of the Tosa sparkling and glancing in the bright noonday light. At the endless rapids and pools of the river, fishermen were at work with their long two-handed bamboo rods, and capacious panniers on their backs, fishing for the large trout with which it abounds.

Looking up the Val d'Ossola, a coronet of distant mountains beautifully enclosed its head, varied by all the rich autumn shades of purple, red, and yellow; with the deep blue haze peculiar to Italian scenery: and surmounted by the snowy diadems of the Pizzo Parabianco over the Val Bugnanco; the Monte Leone or Monte Castello over the Val di Vedro; and the Cima Rossa and Grieshorn in the Val Formazza; glittering like diamonds in the deep blue sky.

On the hill of the Matterella, to the south-west of Domo d'Ossola, stands the Calvary, an imitation, as already observed, of the Sacro Monte of Varallo; founded in 1688 by the Capuchin monks, who had a convent here: representing in a number of chapels, by means of modelled figures, the chief events of the last days of our Saviour.

It is a fact hardly known to any of the thousands of consumers of Eau de Cologne, that the first manufacturer of it, Paolo Feminis, came from Vigezzo, near Domo d'Ossola. Travelling through Germany as a hawker, with a pack on his back, he happened at Cologne to meet with an English Colonel, who, seeing bottles of perfume among his wares, instructed him in the virtues and preparation of "Goa water,"

which had been much used in India in the hospitals, especially in cases of dysentery. The perfume rapidly came into repute; he established a large manufactory at Cologne, and was ultimately succeeded by the Farinas of universal fame.

While awaiting a reply from Arona as to the unlucky baggage, we determined to ascend the Simplon to Gondo, to which it had been addressed, and hear if any tidings could be gathered of it there. A "carozza" of most humble build and size, and which, as seemed the fashion at Domo d'Ossola, had evidently never been washed since it left the makers' hands, took us up the Val to Crevola. A slight morning frost had filled the Val d'Ossola with a thick autumn mist, and the changed aspect of the wide valley was marvellous. Nothing of the mountains was visible, but only desolate wastes of stones and gravel, brought down from the Val Bugnanco: and joining to the equally sterile and nude flat of the Tosa, only relieved by dwarf alder beds of dreary uniformity.

But at the foot of the mountain spur, on which Preglia and Crevola are situated, the scene changed like magic, the instant that we emerged from the fog which hung over the flat plain. The bright-looking Italian houses, standing in terraced vineyards, seemed of another land. Their galleried fronts were festooned with glowing sheets of golden orange maize heads: and the sunny balconies, protected by wide overhanging roofs, were alike picturesque and interesting, crowded with sundry products hung up to dry. Some were filled with tobacco, either in long rows of stems hung up reversed, or the leaves only, neatly strung on lines; in others the heads of Indian corn, stripped of the husk, were methodically carried along the balustrades and balcony fronts, in glowing lines. Pumpkins of all sorts, sizes, and shapes, which form so important an article in their "cuisine," lay piled on the outside shelves; and, that no part of this much-esteemed vegetable should be lost, even the peelings were hung up to dry in long spiral strips. Apples and pears, cut

into quarters, were threaded in long festoons; with raisins, figs, capsicums, and haricot pods; ropes of silvery-skinned garlic, and big onions; stores of sausage-skins, bundles of hemp and hemp-seed, and other heterogeneous matters; all speaking of the richness of this noble valley, where not exposed to the ravages of the torrents.

At Crevola the Simplon route leaves the Val d'Ossola for the Val di Vedro, taking to the left bank of the Doveria torrent, just where it struggles through a deeply-rifted gorge, which forms a beautiful and romantic picture from the grand modern bridge of Crevola. Shortly after quitting the Val d'Ossola, the sunny ledges of rock on the right were covered with thick matted patches of prickly pear, *Cactus Opuntia*, which is here procumbent and dwarf, the lobes or pseudo-leaves lying on the rocks, overlapping each other like the scales of a fish; assuming a totally different appearance from the noble trees, 10 or 12 feet high, which in South Italy or Sicily form so beautiful a feature in the foreground. The fruit, too, though ripe, was small and tasteless, instead of the large coral-coloured pears, which are so juicy and grateful an article of food. The scaly heart's-tongue fern and the maiden-hair grew plentifully.

Along the route were several quarries of white statuary marble, and the rough-hewn bases of a number of columns, of immense size, were lying ready to be brought down. From here came the immense monolith columns, and the symbolical statues of the rivers of Italy, which adorn the "Arco della Pace" at the termination of the Simplon road at Milan. The fine-veined gneiss, of which, in different varieties, these mountains almost entirely consist, is also quarried in a number of places; and one kind, which is of a schistose character, is easily formed into tall narrow slabs, like posts; which in the Val d'Ossola are universally used to support the vine trellises, being so much more durable than the wooden poles.

In the mountains near Crevola beautiful masses of aqua-

marine of large size are obtained, and one specimen was offered to me which must have weighed several pounds. In the micaceous and talcose schists of the Val d'Ossola garnets also occur plentifully, and in the form of beautifully regular dodecahedrons, from the size of a walnut downwards.

Nearly up to Varzo the Simplon route is carried along the side of the rugged bed of the torrent, furrowed by the force of the impetuous floods, which constantly cause great injury and destruction to the road, notwithstanding the solid piers of stones built at different angles into the stream all the way up to Gondo. The white clustered houses and campaniles at Varzo, studding a fine open slope of trellised vines, patches of tobacco, and groves of walnut and chesnut, are quite a relief after this barren narrow glen.

Above Varzo the gorge narrows, and up to Gondo increases continually in wildness and sublimity; the towering precipices completely shutting out the sunbeams, which, slanting overhead, left the valley in deep cool shade—here and there lighting up a clump of red and orange-leaved beech and silvery pine, perched aloft on some protruding crag, with a marvellously rich transparent colouring.

After a short halt at the extremely nice little inn at Isella (close to the Sardinian "dogana"), we walked on to Gondo, on the Swiss frontier. Here the valley is surpassingly sublime and stern, from the immense height of the scathed and bare precipices which tower into the narrowed heavens, and shut in the sunless glen like gloomy prison walls of unattainable height. One side valley, opening out opposite the singular tower, built by the old Barons Stockalper, at Gondo, alone broke the savage gloom, and down it poured a glorious flood of light, resting on a forest of autumn-tinted beech. In the midst of it a few brown châlets were grouped on a lovely little green "alp," and the picture was completed by the successive leaps of a foaming stream, which rushed down through it into the main valley. It was most striking to look

alternately at this glowing scene and then at the wild gloomy gorge, closed in at its head by a lofty dome, covered with eternal snow and glaciers.

We walked up to the gallery of Gondo, where the Simplon road, that proud monument of human skill, triumphs over every difficulty, and, without swerving from its course, leaps over the thundering cascade of Frascinone, driving into the solid rock—a marvel of art in days when railways had not familiarized the world with tunnels and viaducts. The gneiss through which the gallery is bored was of such excessive hardness, that, in trying to detach some specimens, I broke off the head of my hammer, which had hitherto never failed on the hardest rocks.

At the "dogana" at Gondo nothing in any way answering to the description of our boxes had been seen, and we turned back to Domo d'Ossola, consoling ourselves for our bootless expedition with thoroughly enjoying the beauty and sublimity of the scenery. We descended in bright moonlight, and it would be difficult to say under which aspect it looked most grand. The moon was so brilliant that I stopped to fill the vasculum with cuttings of the prickly pears, and ferns, from the rocks at Crevola. The change from the Alpine gorge of the Simplon, where last spring's avalanches were still lying unmelted, to the glowing Val d'Ossola, even at night-time, was most striking; and, after having felt the cold keenly at Gondo at noonday, we were only too glad at Domo d'Ossola to sleep with the windows wide open.

The diligence had at last brought intelligence from Arona that our baggage had been forwarded by mistake to Magadino, on the Lago Maggiore, and so by the St. Gothard route, to what point no one knew. The chance of our ever seeing it again appeared very small; but we made every possible arrangement for its recovery, and ultimately, through the kindness of our friend Mr. Gordon, the British Minister at Berne, it was restored to us there. There was no necessity to

linger further at Domo d'Ossola, and we left the next morning for the Val Formazza.

An autumnal mist again enveloped the Val, as we drove in the little "carozza" up to Crevola. The old bridge was famous in the annals of the Val d'Ossola, as the scene of a memorable conflict with an army of Valaisans, who had invaded the Val, and laid siege to Domo d'Ossola, in 1487. The siege was raised by the forces of Sforza, Duke of Milan, and the Swiss driven back on the bridge of Crevola; where they were intercepted and cut off from retreat, and some 2000 of them perished. The Ossolan women, infuriated by the remembrance of former injuries and indignities, added to the horrors of the slaughter; massacring the flying Swiss, wherever they could find them, with their own hands; and even, it is said, tearing out the bleeding hearts from the bodies to feed their dogs.

Beyond Crevola the valley takes the name of the Val Antigorio—a Val not surpassed by any in Piedmont for the rich luxuriance of its vegetation, and the combination of those varied features which had so delighted us, day after day, in the sunny regions of the Italian valleys. Deep forests of chesnut and walnut mantled over crag and dell; festooned and trellised vines, ripe maize, and heavy-laden fruit-trees, bordered the roadside. The vines of the pumpkin, still untouched by the frost, dipped down with their orange blossoms from the warm rocks into the rippling stream below. The wayside oratories were unusually numerous, and bright with frescoes. As the morning sun glanced over the rich ranges of mountains, wooded to the very tops, with a snowy peak here and there above them, the mist rolled slowly away like a curtain, unfolding the beauties of this delicious paradise, and lighting up the wild precipices of gneiss, the stupendous fragments of which lie piled up in the valley, in enormous numbers and picturesque confusion. Some of these must have bowled down from their parent cliffs with terrific force, as they are many hundred tons in weight. On one stood the

ruined keep of an old castle, perched securely on its summit; another had pitched head foremost into the earth, where it stood on its point, like an immense old grey and lichen-covered obelisk, overhanging the road, and vying in height with the forest trees.

Not far from the village of Oira a road branches to the Monte Crestese district, on the opposite side of the valley; and the Tosa is spanned by one of those singular bridges, of ancient construction, with the narrow airy span rising to a sharp angle at the crown, like that at Ponte Grande. This bridge, now the Ponte Maglio, is, according to Bescape, Bishop of Novara, the Pons Manlii; and he derives its name from Cn. Manlius, like that of the Sempione or Simplon, from Servilius Cepio, his fellow consul and colleague in the expedition against the Cimbri. Others have maintained that this could not be the case, for their encounter with the Cimbri took place in Gaul, on the lower Rhone.*

Shortly before reaching Crodo a new bath-house marks the mineral waters not long ago discovered there. The spring yields about fifty litres a minute, of a sparkling, inodorous water; of a piquant and astringent taste, which it loses in twenty-four hours. At first it has a blue tint, which gradually reddens, and leaves a rusty red sediment in its course. According to an analysis by Signor Bianchetti,† it contains sulphate of magnesia, and bicarbonates of iron, magnesia, and lime, with free carbonic acid gas; and is therefore similar to the waters of Courmayeur and St. Vincent. It is now much frequented by Italians in the season. Crodo has also a gold-mine at Alfenza, which yields nearly 250 oz. of gold annually. The gardens on the outskirts of the village were brilliantly gay with chrysanthemums and dahlias.

The village looked as if it were on fire as we entered it.

* Storia di Val d'Ossola del Avvocato F. Scaciga della Silva.

† Le Alpi che cingono l' Italia, Saluzzo, p. 159

from the strange effect of the wreaths of fog which rolled through the streets like dense smoke; while the top of the campanile, and the higher situated houses, glared with the fiery red beams of the rising sun. Here we dismissed our crazy, dingy, little vehicle, and, without much bargaining, got a stout, heavy horse, with a youth, Giacomo Ambrosini by name, as conductor; intelligent and good-natured, but his provincial Italian was singularly uncouth, and difficult to follow.

The excellent road from Crevola to Crodo was being continued to Baceno, and, taking the side opposite to the old and dangerous track, it was carried along a ledge, on the singularly rounded face of a vast precipice, which seemed as if polished by glaciers. The Tosa flows at the bottom of this, at an invisible depth; and near Baceno is joined by the Devera torrent from the Val Devera; where it is crossed by a new bridge, from which is a giddy view of the pent-up torrent, struggling and chafing in its narrow bed, until it joins the Tosa at the bottom of a profound chasm.

The chiming of noonday bells, just overhead, suddenly startled us; as we could not imagine from whence it came, until a sun-glimpse in the fog revealed the campanile and misty outline of a large church; and, shortly after, we came to the village, when the sun once more joyously burst out, and showed us the bright-looking villa-like houses of Baceno, surrounded with gay gardens, at the foot of a warm vineyard slope, the foliage of which glowed with bright yellow and deep blood-red tints. Emerging from the clammy mist which dripped from the rocks, and hid all in obscurity, the surrounding peaks, gilded with the morning sun, now seemed wonderfully bright and clear. The snowy summits of the Monte Cistella, overhanging the valley, and the Pizzo della Rossa at the head of the Val Devera, to the north-west, glistened with a coat of fresh snow; while there was that calmness and inexpressible softness in the air which render

such lingering autumn days some of the happiest and most tranquillizing in the year. Baceno had a well-to-do appearance, and many of the houses were the residences of retired capitalists; and the people, as we stopped to talk to them in passing, left on our minds a very favourable impression of their courtesy and superior address.

Leaving the Val Devera, which is shut in by a range, snow-clad on the northern side—and along the crest of which runs the boundary between Italy and the Valais, crossed by one or two difficult tracks from Croveo—our route lay to the right; mounting a steep, narrow path, round the shoulders of the vine-clad hill, which descends from the high range dividing the Val Antigorio from the Val Formazza—on which we now entered. Looking down behind us, we seemed, while basking in bright sunshine, to have emerged from the clouds into the regions of clear upper air; as the densely packed volumes of mist rolled up the deep and yet sunless Val Antigorio, and, whirling into fleecy wisps, melted like magic when they reached our warmer stratum.

At the little wayside inn at Premia, Giacomo informed me that he was going to leave us here, and turn back to Crodo with his horse, seeming to have made up his mind that we could not help ourselves; but he was soon convinced of his complete mistake when I refused to pay him a single "soldo," and spoke of the Syndic at Baceno. I must do him the justice to say that, like most of his countrymen when fairly out-manœuvred, he gave in with a shrug of the shoulders, and was the more obliging for the rest of the journey.

The track above Premia was villanous,—over slippery boulders and channelled rocks, on which E.'s clumsy horse stumbled and floundered, to her great discomfort, after the very different pace and gait of a mule. The softer features of the rich Val Antigorio had gradually disappeared, and, between the hamlet of Pie di Latte and the little church of

San Rocco, we saw the last vine trailing up the sunny side of a large slab of rock. The valley closed in as we advanced between granite mountains, which succeed the previously prevailing mica schists abounding in garnets. At San Rocco, on the left-hand side, the granite rises perpendicularly in a stupendous wall-like precipice, built up, as it were, of enormous horizontal courses, or strata, from ten to sixty feet in thickness. The effect of this wonderful mass, by the side of which the vastest Cyclopean walls sink into insignificance, is most impressive. As a study for the geologist, also, it has great interest; and my attention was especially attracted, at a point above San Rocco, by a number of very singular curved lines in the granite face, showing a remarkable concboidal fracture. This is perhaps caused by nodes of felspar enveloped in coatings of mica, which bend round them in wide curves. De Saussure was so struck with these wonderful granite cliffs, that he made a second special visit to examine them and take accurate measurements, and gives an animated and interesting description of them.*

The scenery of the Val Formazza is as wild and sublime as the Val Antigorio is rich and beautiful, and abounds in the most striking and romantic points of view. Hemmed in on either side by the beetling granite crags, the bottom of the valley above San Rocco is a labyrinth of blocks, thrown together into the wildest confusion; and through which we threaded our way along the narrow track. The Tosa poured impetuously down through these; and shouts attracting our attention, we came on a number of foresters sending timber-trees down the stream. The huge masses balanced for a moment on the top of the cascades, then shot swiftly down, and plunged into the pool below, from the depths of which they suddenly bounded up, some fifty yards lower down, like leviathans; and as there were hundreds of trunks afloat at once, struggling and crashing through the wild course of the

* Voyages dans les Alpes, § 1752

torrent, assisted in their progress by the long iron-hooked poles of the woodmen, who jumped nimbly from one to another, the scene was most exciting, and we could have stayed for hours watching it.

Above Foppiano the walnut disappears; and the Tosa is also lost for a time in the deep and romantic gorge; high above which the track ascends, crossing it by a precarious bridge, and continuing through a most beautiful forest of pine, mixed with deciduous trees, then glowing with crimson and orange hues. From the summit of this we saw the plain of Formazza spread before us, on which scarce a tree was visible, and hemmed in by barren ranges; the mother church of the district standing at the upper end, and near it the little German inn; where, as we arrived, we found the priest sitting on a stone wall, smoking a huge meerschaum until the vesper-bell began to ring.

The owner of the inn, after some little time, came up, driving home his cattle for the night; when we were taken in, and found plain rough fare, with great civility. They spoke chiefly German; and from Foppiano to the head of the Val Formazza all the people are of German race, in language, customs, and construction of their houses. As to their origin, there can be no doubt that they have crossed at some early period from the Valais over the Gries; and the analogy of this foreign colony with the often-described German settlements of the Vals of Monte Rosa is remarkable—the Italians here, as there, having left the bleak upper Val to the hardier and thrifty German.

At night they lighted the stove for us in a little room, wainscoted with pine, with deal table, and benches; and we supped on rye-bread, goats'-cheese, and a good omelette. The inn was in reality a casual place of entertainment for passers by; and they said travellers were so rare, that they had no beds to accommodate them; but they gave up their own to us; and as everything was clean and neat, we fared

well. The view of the Val Formazza was very grand in the stillness of night, as the moon rose over the jagged granite ridges to the east, just above where the Furca di Bosco, a wild pass, leads over into the Val Maggia. Giacomo had returned with his clumsy horse to Crodo, having demanded an exorbitant price for crossing the Gries next day; and we had some difficulty in replacing him. At length a bandit-looking Italian lounged in at night to offer himself, addressing me familiarly, every sentence, as "Caro mio" The host, in recommending him, whispered to me that he was a famed smuggler, and knew the mountains in all weathers; and his swarthy face, keen eyes, black hair, and bushy beard, showed a reckless temperament, which made him a somewhat doubtful companion on the lone mountains. But we had always found these contrabandists a brave set of fellows, when we intrusted ourselves to them; and, after a long bargaining, I engaged him and his mule at my fixed rate of eight francs a day.

The morning brought an unexpected difficulty. Luigi insisted on another mule to carry the baggage, and I as firmly resisted. He was first surly and morose, and refused to allow a single article to be strapped on. He then tried coaxing, addressing me, with his hand on my shoulder, as "Caro mio," in the most affectionate manner, which I took advantage of: and showing him how well the bags fitted the saddle, at last, with a little patience and good temper, got them adjusted; but he declared he would let no more be put on. Seeing it was useless to contest it with him just then, I gave him the plaids to carry himself, and, slinging the rest of the things over my own shoulders, on my alpenstock, to his and our host's astonishment, I told him to follow, and led the way up the valley. At the end of a mile he was quite softened, and suggested transferring part of my load to himself and the mule—then begged to be allowed to do so: and before we had gone far all was comfortably strapped and settled on E.'s mule, as I had anticipated; his surly mood

was vanquished, and we trudged on together up the Val, the best friends in the world.

The ascent of the upper Val Formazza is very singular, and almost unique; as it is not continuous, but mounts by alternate steep climbs, and long open plains, or successive stages, one above the other. The first is the flat of Formazza, with the various names—which are all double, German and Italian, in this Val,—for it and its hamlets, of Wald, Pomat, Zumsteck, Ponte, Ingrovello, Incanza, Fructvald, Frua, &c. The little groups of houses are chiefly wooden châlets, of German construction; some richly carved, with faded painting and gilding; the glazing of the windows circular or hexagonal; and the rich blooms of thick-stemmed carnations and cloves hung pendent, in great bunches, from the outside galleries; and of which, as we halted, large bouquets were presented to E. The beehives, peculiar to the Val Formazza, are worth notice; some, tall square boxes; others, hollow trunks of trees set on end; with an entrance by a cross slit, midway in either.

The path from Fructvald led up a steep ascent to the falls of the Tosa, justly celebrated as the finest cascade in North Italy; which presented a most magnificent appearance as we approached it from below; deafening us with its thundering roar. Tumbling over the head of a vast semicircular wall of granite, of thick horizontal courses, it foams down for a thousand feet, in the most graceful and varied succession of leaps, from ledge to ledge, in enormous volume; and to judge of its real grandeur should be seen not only from the steep path which flanks it, but also from the green pastures below, and the brink of the cliff above.

The next stage is that of Auf der Frutt, on the very edge of which, overhanging the falls of the Tosa, stands the little chapel of St. Anthony. The plain is a singular flat, like a lake filled with alluvium, through which winds the Tosa, crossed, by a rude plank bridge, to a group of lonely châlets.

The view back from here, down on the Val Formazza and its encircling mountains, was grand; and the colouring of the wild snow-sprinkled ridges most exquisite. Beyond Auf der Frutt we wound for some time through Alpine pastures; in summer evidently one dazzling garden of wild flowers; but now there was nothing to be found for a souvenir, except the holly fern, *A. lonchitis*, which was abundant. The scenery grew wilder and more desolate; and at various points we had magnificent views of the snow Alps of the Gigelenhorn, the Helgio or Hellhorn, and the huge crystal block of the Tahlihorn.

On the third plain of Morast, the sprinkled châlets of Kerbachi were utterly deserted, all but one little hut, where a woman and her dwarfie boy only seemed to make the solitude appear more melancholy. From here the track led along and under a vast slope, with huge and singularly sterile mountains opposite, black as night, and from the tremendous bare sides of which the snow had shot off in avalanches, filling up the intersecting ravines with enormous sheets of snow and imperfect glacier.

A steep and difficult climb led, round the narrow shoulder of a projecting mountain, up to the fourth and last plain of Bettlematt. I had allowed E. and Luigi to get in advance while I examined the schistose rocks here succeeding the granite; in the gullies of which, handsful of rude octohedral garnets, hard as iron, might easily have been picked up.

When I followed them on to the plain of Bettlematt, the scene was a singularly wild and grand one. The dreary waste was spread far and wide with boulders and rocky débris; through which wound a torrent descending from an amphitheatre of mountains, entirely closing in the head of the valley. On the face of these was a wide patch of sloping snow, still unmelted, the source of the Tosa; and above this, bridging across the entire valley, in mid air, was the magnificent mass of the great Gries Glacier; like moun-

tains of icebergs, filling the head of the Val, which, however, it does not descend. It finds an outlet northward on the Swiss side, where its radiated and scalloped structure, as it plunges deep into the valley, is beautifully seen.

Pass and Glacier of the Gries

A cross just appearing on a mountain top to the right, pointed out our course; to which we climbed by a steep track, extremely narrow and arduous for the mule; and E. had to ascend on foot. At last the summit was gained, after passing a perilous ledge on the brink of a fearful precipice;

and we halted on the glacier edge, under shelter of its ice-cliffs, by a little emerald green pool embedded in the desolate lateral moraine.

Here we picketed the mule and dined on our hard-boiled eggs; while Luigi, who had now become our fast friend and had entreated to be allowed to accompany us to the Swiss Oberland, collected together some fragments of wood and straw, left by peasants who had crossed the pass with cheeses, and made a shortlived fire, whose blaze served to warm us as we sat shivering in the keen wind.

The deep blue mountains of Italy lay now below us; above, the grand Gries Glacier, shut in by huge rugged pyramids, at a height of 8000 feet, stretched in a wide sea of icy desolation and wild sublimity, while the howling wind which swept over it warned us to quicken our steps and cross its treacherous surface.

Our light meal finished, and the baggage packed on the saddle for the descent, we traversed the black sodden moraines for a short time, until we reached the ice at an accessible point. We set foot on the snow-covered glacier, just as dense volumes of gloomy clouds whirled rapidly down on the fierce blast of the rising storm, throwing a strange lurid shade over the icy solitude. Here and there bleached skeletons of animals, protruding from the snow, and the still fresh and frozen body of a mule, showed the perils of the pass in unfavourable weather, and heightened the mournful wildness of the scene. A crevasse lay across the centre of the glacier, crossed by a temporary bridge made of a few larch poles and tops, covered with beaten snow,—and this was the boundary between Piedmont and Switzerland.

To the northward the fast-closing clouds gave us a broken glimpse, framed in fantastic mist wreaths, of the snowy Swiss Alps of the Oberland, the Finster Aarhorn, the Schreckhorn, Sidelhorn, and other icy peaks; with the pass of the Grimsel, which we were to cross the following day. Between us and

them lay, far down and out of sight, the rush-grown alluvial flats of the Rhone valley, on which are grouped the dreary weather-stained châlets of Obergestlen,—our destination for the night, which we reached by a few hours' descent, down the steep and desolate pass of the Eginen Thal.

Before we crossed the boundary we turned to take one more, last, lingering look, on the purpled mountains of the Italian valleys; but the storm had swept down upon us, and blinding clouds of snow soon enveloped every object, except the poles marking the track, in utter obscurity. We drew our plaids closely round us as we breasted the north wind, which searched to the skin, with a keenness that seemed intense, after the blazing sunshine of Italy. We now felt we had fairly bidden adieu to southern skies and southern scenes, and had left behind us the last of those exquisite Vals, through which we had been wandering for three months with unflagging interest and delight.

Each in turn, as we had penetrated into and explored its innermost nooks, had not merely afforded gratification to the outward senses and an invigorating stimulus to one's physical frame; but also had, day by day, impressed us with ever-increasing convictions of the infinite power, wisdom, and goodness of the Almighty; which had invested even these remote and little-known recesses with such wonderful variety, beauty, and grandeur, and had framed and fitted them so marvellously for the abode or the enjoyment of man: and though we now numbered those days of delightful sojourn among them with things of the past, yet our memories were stored with remembrances for future and lasting enjoyment.

The sublime snow Alps, with their mighty glaciers and thundering avalanches,—the rugged mountains and vast primeval forests, the ceaseless torrents, leaping and foaming down to the sunny vales,—where the broad-leaved fig, the spreading chesnut, mantling vines, and the fruits of the earth in richest profusion fill up the picture of romantic beauty, and

the last work of creation, flourishes in a type of r comeliness, united with simplicity and industry. equalled—all were ineffaceably impressed on the tablets minds. We had learned to realize more deeply the force t those words of the Divine Psalmist, which so aptly recur he thoughtful traveller,—either when face to face he holds munion with such scenes of sublimity and beauty; or when, ter days, the memory of them stand vividly before stirring up earn to be again bodily among ;—words of vast me or time and for eternity— e loftiest theme alike of l angels:—

"The works of the Lor :
"Sought out of all the ave pleasure therein.
"His work is worthy to be pra d, and had in honour:
"And his righteousness endureth for ever."

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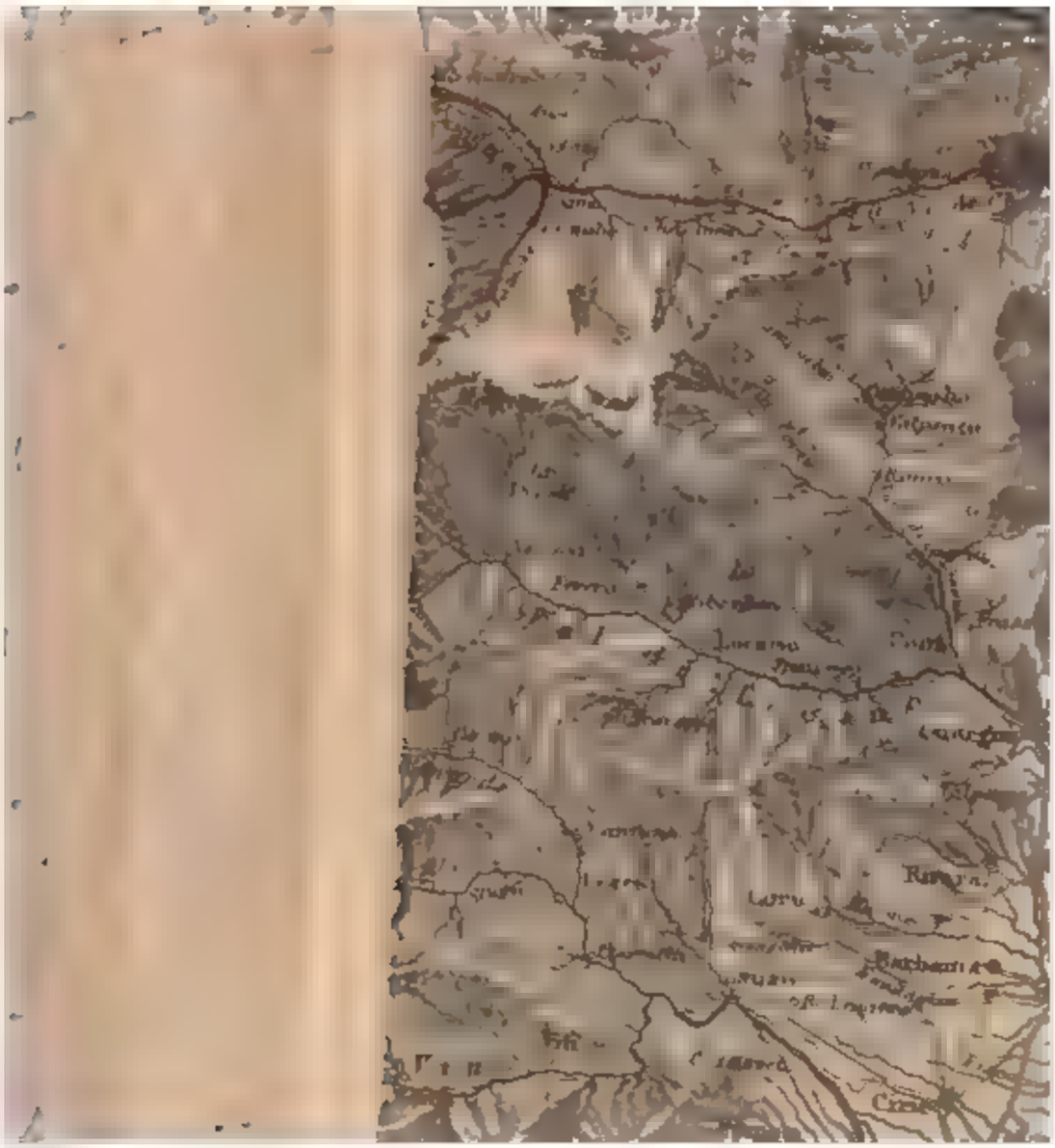


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